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FOUR VIRTUES: INTERVENTIONS FOR GOODNESS' SAKE

A thesis submitted in partial fulfillment of the requirements for the degree of Master of
Science at Virginia Commonwealth University

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Table of Contents

	Page
Acknowledgements	ii
List of Tables	v
List of Figures	vi
Abstract	vii
Introduction	1
The Current Study	2
Review of the Literature	4
At the Outset, What Do We Know about Forgiveness and Health?	5
Purpose of the Present Review	6
Method of the Review	7
Review of Empirical Literature	8
Unforgiveness	8
Forgiveness as decreasing negative and increasing positive emotions ...	9
The role of developmental processes across the lifespan	10
The influence of religion and spirituality	11
The forgiving personality and health	13
Mental health as a mediator	15
Physiological responses as mediators	16
Mental health and physiological responses as cooperative mediators ...	17
Forgiveness and health in rehabilitation populations	19
Does health influence forgiveness?	20
Physical health in forgiveness interventions	21
When forgiveness is not healthy	22
Summary	24
Discussion	25
Limitations	25
Research Agenda	26
Conclusion	32
Statement of the Problem	33
Forgiveness	34
Humility	35
Patience	36
Self-Control	37
Positivity	37
Workbook Interventions	39

Purpose of the Present Study	39
Hypotheses	40
Method	40
Forming the Interventions	40
Participants	41
Measures	41
Demographic information	41
Trait measures	41
Intervention workbooks	42
Procedure	46
Results	47
Preliminary Analyses	47
Hypothesis 1	50
Hypothesis 2	52
Hypothesis 3	59
Discussion	67
Hypothesis 1	67
Hypothesis 2	67
Hypothesis 3	69
Limitations	72
Future Directions	74
Conclusions	75
List of References	77
Appendices	93
Appendix A – Summary Table for Forgiveness and Health Literature Review	93
Appendix B – Measures	136
Vita	142

List of Tables

	Page
Table 1. <i>Summary Table for Forgiveness and Health Literature Review</i>	93
Table 2. <i>Means, Standard Deviations, and Alphas for Outcome Measures, N = 168</i>	49
Table 3. <i>Intercorrelations for Outcome Variables at Time 1, N = 168</i>	51
Table 4. <i>Means, Standard Deviations, and Alphas for Outcome Measures for the Three Virtue Conditions Compared to the Positivity Condition and to the Control Condition, N = 144. . .</i>	60
Table 5. <i>Improvement in Outcome Variables by Condition – Hypothesis 2</i>	68
Table 6. <i>Improvement in Outcome Variables by Condition – Hypothesis 3</i>	70

List of Figures

	Page
Figure 1. Differences within and across conditions in forgivingness	53
Figure 2. Within-condition differences in humility	54
Figure 3. Within-condition differences in patience	55
Figure 4. Within-condition differences in self-control	56
Figure 5. Within-condition differences in positivity	57
Figure 6. Within-condition differences in negativity	58
Figure 7. Differences within and across conditions in forgivingness	61
Figure 8. Within-condition differences in humility	62
Figure 9. Differences within and across conditions in patience.	63
Figure 10. Within-condition differences in self-control	64
Figure 11. Within-condition differences in positivity	65
Figure 12. Differences within and across conditions in negativity	66

Abstract

FOUR VIRTUES: INTERVENTIONS FOR GOODNESS' SAKE

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Virginia Commonwealth University, 2013.

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Empirical interest in promoting virtues has dramatically increased over the last decade. The present study will focus primarily on the warmth-based virtues of forgiveness and humility, and the conscientiousness-based virtues of patience and self-control. I introduced participants ($N = 135$) to a workbook intended to promote one of these four virtues, or to promote general positivity for participants in a workbook control condition. I hypothesized that virtue workbooks would produce higher levels of the target virtue, more so than in both a non-action control condition ($n = 33$) and in a control condition that completes a workbook that promotes general positivity. The forgiveness, humility, patience, and positivity workbooks did indeed build their respective targets. Virtue workbook participants reaped more benefits than the positivity participants, but both improved more than the control condition. These findings suggest that workbook interventions serve a valuable purpose in the promotion of goodness.

Four Virtues: Interventions for Goodness' Sake

The importance of virtues has been acknowledged since Ancient Greece, but since then, virtues have been defined as “the character strengths that make it possible for individuals to pursue their goals and ideals and to flourish as human beings” (Fowers, 2005, p. 4).

In other words, virtue is not simply an understanding of one's character strengths, but the presence of behaviors which are congruent with these strengths. Fowers (2005) explains that “a virtuous life is a life well-lived as a whole, with a coherent, integrated set of aims, the strengths of character necessary to pursue those ends, and the social bonds that give place and purpose to activities” (p. 5). The key components worth remembering are 1) strengths of character, 2) flourishing, and 3) purpose.

So what do virtues have to do with psychology? Fundamentally speaking, virtues explain our behavior (Fowers, 2005). They provide insight into our motivations and help us to understand what people are capable of doing. Virtues provide connections across many domains, such as psychology, religion, and spirituality, and extend to our personal, professional, and spiritual lives.

But perhaps most importantly for research, looking to virtues provides information about relationships and solutions that had not been previously examined. For example, gratitude is highly correlated with quality of life (Emmons, 2007). If you could choose to keep running on the hedonic treadmill of life in attempt to increase quality of life, or just be grateful for what you have and reach the same result, which would you choose? Many other virtues provide such resounding benefits.

What other virtues am I talking about? Chances are, you've heard of “the four Cardinal virtues,” (prudence, justice, temperance, and courage), and your mother probably reminded you

at least once in your life that “patience is a virtue.” Worthington and Berry (2005) would classify these as conscientiousness-based virtues, along others such as justice and self-control. The aim of these virtues is fairness, reciprocity, and cooperation within the self and among others, and they are more inclined to be explicitly beneficial to the success of society.

Alternatively, Worthington and Berry (2005) identify warmth-based virtues. These include love, forgiveness, compassion, and humility. Such virtues tend to be internal processes as opposed to societal interactions, though one might argue that they often make societal interactions much more pleasant. These virtues are aimed toward an inner peace, comfort, and harmony. Warmth-based and conscientiousness-based virtues do correlate across categories because virtue in general is a common denominator of both, but the correlation among virtue within these categories is stronger.

The Current Study

In this study, I examined the following virtues: forgiveness (warmth-based), humility (warmth-based), patience (conscientiousness-based), and self-control (conscientiousness based). These virtues were identified in a study conducted by Berry, Worthington, Wade, Witvliet, and Kiefer (2004), as those to be most highly endorsed by those who subscribe to warmth versus conscientiousness-based lifestyles. In other words, one who would be likely to endorse warmth-based virtues is most likely to endorse forgiveness and humility in particular, and the same goes for patience and self-control in the conscientiousness-based realm. I selected these virtues because they exemplify both major groups of virtues, yet they remain distinct from each other.

This was determined by assessing the value an individual puts on 18 classic virtues using rating scales, forced choice, and ranking. Upon completion of these three methods, Berry et al. (2004) performed an unfolding analysis within item response theory to determine which virtues

were most highly associated with warmth and conscientiousness, based on the idea that warmth and conscientiousness are on opposite ends of a continuum. Units of logits were used to place items on this continuum, and forgiveness/humility ended up on one end, with patience and self-control on the other end.

Having determined which virtues are the most exemplary of warmth and conscientiousness in order to insure diverse and distinct virtues among conditions, I examined some of their prominent benefits. While virtues in general are associated with positive experiences, healthy relationship, and success in leadership (Peterson & Park, 2011), each of the following virtues comes with its own particular repertoire of advantages. For example, forgiveness has been associated with longer relationships, better cardiovascular health, lower blood pressure, and greater well-being (Worthington, Witvliet, Pietrini, & Miller, 2007; McCullough & Worthington, 1994). Further, higher empathy and positive regard for others, the actualization of religious values, increased meaning in life, and greater likelihood for reconciliation have also been linked to forgiveness (Williamson & Gonzales, 2007).

Humility too has its fair share of positive associations. It is associated with favorable health (Krause, 2010), higher academic performance, better relationship quality, higher patience and empathy, and higher ratings of job performance (Peters, Rowat, & Johnson, 2011). One of these benefits, patience, has advantages in itself, which include increased goal effort, goal satisfaction, lower depression, and a greater tendency for positive coping (Schnitker, 2012).

Of the four virtues selected, self-control has far and above the greatest amount of research surrounding its benefits and implications. Such benefits include higher GPA, lower rates of psychopathology, higher self-esteem, healthier eating and drinking habits, better relationships

and interpersonal skills, a tendency toward secure attachment, and appropriate emotional responses (Tangney, Baumeister, & Boone, 2004).

All of these benefits, as well as the statement of the problem to be outlined in a coming section, led me to develop three fundamental research questions: (1) Can take-home, workbook-based interventions aimed at promoting four separate virtues promote those virtues? (2) Will changes beyond the target virtue occur after completing such a workbook? and (3) Will participants endorse the effects of the workbook because of actual virtue-relevant changes, or just because the workbooks promote a more positive way of looking at life?

I reviewed the literature to provide context for answering these questions. Because a review of the implications and associated inventions of forgiveness, humility, patience, self-control, and positivity would far expand the scope of possibility for such a review, I narrowed the focus of the review to of one of the current study's target virtues, forgiveness. In this review, I illustrate forgiveness in terms of how its successful presence and promotion can benefit the individual: better physical health. This provides a jumping block for the possibilities of promoting related virtues, such as humility, patience, and self-control, thereby illuminating justification for the importance of virtue-promoting interventions. A brief review of the present state of the literature surrounding the other virtues in question (humility, patience, and self-control) will follow.

Review of the Literature

For decades, the medical model of psychology guided research to find biological cures for mental ailments. Proposed connections between mental and physical health were approached in a basic way, involving such treatments as ice baths and leeching to “cure” psychopathology.

As mental health became estranged from physiology, innumerable discoveries were made relating to what caused and could be done about psychopathology.

Of all the positive psychological constructs currently being examined, forgiveness has been at the forefront of character strengths in terms of this research. Stemming from its interdisciplinary nature, researchers have called for more studies on forgiveness as it relates to both mental and physical health (McCullough, 2000; Thoresen, Harris, & Luskin, 2000). Forgiveness is related to a myriad of topics, as demonstrated by its presence in a variety of journals. Biology and health can now be included among these, as numerous studies have shown forgiveness is linked to a positive physical health status (Worthington & Scherer, 2004). However, the complexity of this relationship appears in recent research, which acknowledges the positive relationships between forgiveness and mental health (Baskin & Enright, 2004), but fails to show a definitive mechanism (Green, DeCourville, & Sadava, 2012).

At the Outset, What Do We Know about Forgiveness and Health?

The true answer to this question is: very little! Many existing studies draw from a variety of concepts of forgiveness, such that many results may be attributed more to a lack of unforgiveness than to the addition of compassion and understanding that comes with genuine forgiveness. Thus, the available research is to be interpreted with caution.

Forgiveness has been tied to a number of positive health outcomes, including self-esteem, well-being, social-activity, relational closeness, and conflict resolution (Coates, 1997; Fincham, Hall, & Beach, 2006; Rivard, 2005). Forgiveness has also been found to guard against several negative health outcomes, including depression, anxiety, and stress (Mate, 2006; Quenstedt-Moe & Popkess, in press). This research works within the working definition of forgiveness by Wade and Worthington (2005) as “a process that leads to the reduction of unforgiveness (bitterness,

anger, etc.) and the promotion of positive regard (love, compassion, or simply sympathy and pity) for the offender” (p.160). In reducing the negative and increasing the positive, forgiveness should be associated with both positive outcomes.

Forgiveness though, is not a simple concept. Self and other forgiveness in recent years are seen as similar, yet distinct phenomena, as evidenced by their noted predictors (self-forgiveness being predicted by self-esteem; other-forgiveness being by close relationships) (Coates, 1997). While both self and other forgiveness are tied to better mental and physical health, self-forgiveness is more challenging to achieve, but results in a greater effect for health than other-forgiveness (Avery, 2008; Webb & Brewer, 2010; Wilson, Milosevic, Carroll, Hart, & Hibbard, 2008).

The foundation for forgiveness research was laid when Witvliet (2001) noted studies which found a relationship between forgiveness, unforgiveness, and hostility with overall health. Further, Enright (2001) suggested that forgiveness and hostility are more salient than the relationship between relaxation and hostility, as forgiveness confronts problems and leads to healthy changes. Consistently, the more forgiveness a person reports, the better they report their physical health; a significant finding, confirmed by physiological responses and reactivity measures (Lawler, Younger, Piferi, Billington, Jobe, Edmondson, & Jones, 2003; Lawler, Younger, Piferi, Jobe, Edmondson, & Jones, 2005; Lawler-Row & Piferi, 2006). As suggested by Lawler-Row, Hyatt-Edwards, Wuenssch, and Karremans (2011), research must now begin to tie forgiveness and health to a theoretical grounding.

Purpose of the Present Review

This review will explore nearly 100 studies which have inspected possible factors for forgiveness and health, as related to the major themes: unforgiveness, decreasing negative and

increasing positive emotions, developmental processes across the lifespan, religion and spirituality, personality, mental health, physiological responses, and the combination of the latter two.

Method of the Review

A PsycINFO search of “forgiveness” on May 29th, 2012 yielded 2,504 results. When narrowed, these findings which included “physical health” yielded 56 results. No date restrictions were applied to the articles reviewed. One dissertation was omitted from the review, as the author later published it as a peer-reviewed journal article that was also included in the search results.

Another PsycINFO search of “forgiveness” on June 5th, 2012 yielded 2,504 results. Within these results, a search criterion of “health” yielded 730 results. The addition of “physical” to the search reduced the results to 122. These results, requiring “forgiveness” as an index word, brought the results to 73. Of these 73, 34 were unique from previous searches and added to the review. Three were then omitted due to an emphasis on sexual health and another was omitted due to the inability to acquire an English translation, bringing the number of reviewed papers to 85.

The two previous search criteria were used again in a PsycINFO search on February 23rd, 2013 in order to update the number of reviewed studies. This update yielded four new articles relevant to this review; one was omitted due to an emphasis on sexual health.

Additionally, seven chapters in the “The Body and Forgiveness” section of Worthington’s *Handbook of Forgiveness* were added, bringing the grand total of reviewed papers on forgiveness and physical health to 95.

Review of Empirical Literature

Of the 95 works reviewed, 49 were correlational studies, 26 were reviews, 6 were quasi-experimental studies, 5 were true experimental studies, 3 were case studies, 3 were presentations of models or theories, two were qualitative, and one was a peer commentary. Of these, 48 were cross-sectional, and 14 were longitudinal; 49 appeared in peer-reviewed journals, 31 were dissertations, and 15 were book chapters.

This review revealed eight major mechanisms that might contribute to explaining the relationship between forgiveness and health: the effects of (1) unforgiveness, (2) decreasing negative and increasing positive emotions, (3) developmental processes across the lifespan, (4) religion and spirituality, (5) personality, (6) mental health, (7) physiological responses to stressors, and (8) the combination of mental health and physiological responses. These can be found in the “Mechanisms Affecting Forgiveness and Health” section of the attached summary table (Table 1; Appendix A).

Unforgiveness. Studies of anger and hostility pervaded early forgiveness research, revealing their adverse effects on blood pressure and cardiovascular health (Barefoot, Dahlstrom, & Williams, 1983; Booth-Kewley & Friedman, 1987; Smith & Christensen, 1992). As a noted reducer of anger, forgiveness and its angry counterpart, unforgiveness, found themselves a burgeoning topic in health-related research. For example, Berry, Worthington, O’Conner, Parrott, and Wade (2005) found anger, hostility, neuroticism, fear, and vengeful rumination were linked to unforgiveness. Studies such as these hinted that reducing unforgiveness and thereby reducing anger, hostility, and other negative attributes, could influence health outcomes.

This idea was fleshed out in a review by Witvliet (2005), in which she reviewed four decades of research surrounding forgiveness and health. She posited that unforgiveness leads to rumination, avoidance, and revenge, which invites attentional, physiological, and behavioral components of emotion, causing such outcomes as anxiety, depression, hostility, and heart disease. This suggests that an emotional shift caused by components of unforgiveness is responsible for the physiological responses that lead to poor physical health. Notably, when people are under stress, they often respond with negative emotions like anger, resentment, anxiety, and depression. Those emotional responses are related to elevated stress responses in peripheral physiological systems.

Webb and Brewer (2010) conducted a correlational study of 126 college-aged problematic drinkers. They found that the relationship between unforgiveness and health outcomes may be moderated by unhealthy coping mechanisms, such as problem drinking. Unhealthy coping, as well as the other variables in this section, fall among the harmful behaviors identified in a review by Harris and Thoresen (2005). Unhealthy coping may explain much of the variability between forgiveness and health. Longitudinal studies are needed to support this claim.

Forgiveness as decreasing negative and increasing positive emotions. Harris and Thoresen's (2003) biomedical model of forgiveness and health sees forgiveness as reducing negative traits, increasing positive traits, and this combination inviting better health outcomes. In effect, better health outcomes appear when a reduction of unforgiveness, an increase in positive affect, and their effects on behaviors are combined.

The effect of affect in the forgiveness and health relationship influenced Green, DeCourville, and Sadava (2012), whose recent correlational study gave support to the role of emotions. In a sample of 623 college freshmen, forgiveness was linked with decreased negative

affect, as well as increased positive affect and social support, which were both implicated in better health outcomes. It appears that replacing the negative with the positive emotions and motivations, which is at the core of forgiveness, extends both the achievement of forgiveness and its relationship with health.

The role of developmental processes across the lifespan. In 2005, a review by Toussaint and Webb acknowledged the impact of affect on forgiveness and health while also claiming developmental processes may be a factor in this relationship. For example, multiple correlational studies involving 1,615 nationally-representative participants suggest an association between higher forgiveness and health with old age (Sarinopoulous, 2000; Toussaint, Williams, Musick, & Everson, 2001). A case study of an elderly Caucasian woman (Brink, 1985) revealed lifespan changes such as spiritual fulfillment, outrage with immorality, and acceptance of health limits and personal losses. Changes with age such as these may explain the association between higher forgiveness and health with old age.

In addition, Turesky and Shultz (2010) conducted a qualitative review of three developmental contextual models. They concluded that a decline of physical health naturally occurs with increasing age. This decline in health leads to increased past reflection about life, which can lead to greater striving for meaning and hence greater spirituality, as well as an increased awareness of the approach of death. The sense of impending death might stimulate review of past relationships, increasing the awareness of events that need forgiving. In combination, spirituality and potential need for forgiveness may aid a sense of peace about the past and with death. These mental health associates of deteriorating health as a result of aging may contribute to higher forgiveness outcomes, illustrating a potentially bidirectional, symbiotic relationship between forgiveness and health that should not be overlooked.

The influence of religion and spirituality. In a chapter not included among the courses within the present review, Worthington, Berry, and Parrott (2001) claimed religion, forgiveness, and health weave a tangled web of direct and indirect relationships, involving a number of mechanisms. Religion and forgiveness can be difficult to separate due to the inherent morality in forgiveness, as well as forgiveness' role as a religious coping mechanism. Previous research has shown the importance of religiously based coping in terms of positive health outcomes, even above non-religious coping (Pargament, Ensing, Falgout, Olsen, Reilly, & Van Haitsma, 1990). In his 2003 review, Webb insisted that forgiveness as a spiritual coping mechanism has been tied to better health outcomes, and additional research suggests that religious coping mechanisms in general are tied to better outcomes in both mental and physical health (Pargament, Koenig, & Perez, 2000).

Cultural dimensions may affect the links between forgiveness, religiosity and health. A correlational study of 96 Christian women was conducted by Quenstedt-Moe and Popkess (in press). They found women who felt that they were treated as equal to men in their Church doctrine had a higher chance of forgiveness, decreased depression and anxiety, and overall better health. Svalina and Webb (2012) conducted another correlational study involving 141 adults in an outpatient physical therapy setting. They found that feeling forgiven by God as opposed to forgiving others was tied to physical health, but that forgiven-by-God-health relationship was influenced by the values and behaviors normative to that religion (Svalina & Webb, 2012). This research posits that the religious climate an individual resides in may impact their view and practice of forgiveness, thereby influencing the way forgiveness impacts health.

Lawler-Row (2010) conducted a trio of correlational studies involving over 900 adults. Lawler-Row (2010) differentiates religiosity within two main concepts: religious concepts and

spiritual concepts. She found traditionally religious concepts, such as beliefs and church attendance, to be highly connected to trait, or personality-based, forgiveness. She found that spiritual concepts, such as feelings of communion with God, were heavily associated with state, or situational, forgiveness. She found both trait and state forgiveness to be linked to better health using a variety of measures, from successful aging to better sleep at night.

Of course, spirituality and a forgiving personality are not mutually exclusive. Lawler-Row and Piferi (2006) examined 425 middle-aged adults. They found that a forgiving personality was correlated with social support, healthy behaviors, and spiritual well-being. All of those led to good health outcomes. However, spirituality can be a double-edged sword. In a study conducted by Johnstone and Yoon (2009), survey results of 118 outpatient individuals indicated that positive spiritual experiences and willingness to forgive were correlated with better physical health in a traumatic brain injury population. However, they found that negative spiritual experiences, such as feeling abandoned by the sacred, were associated with worse physical and mental health. Thus, spirituality at large is not always associated with positive health outcomes. The health outcomes associated with spirituality depend on whether the spiritual experience is positive or negative.

In 2004, Witvliet, Phipps, Feldman, and Beckham explored the role of negative religious coping in forgiveness and health. They conducted a correlational study of 213 veterans with PTSD. Limited self-forgiveness and other negative religious coping mechanisms such as blaming God or feeling abandoned by God, were linked with higher depression and anxiety, as well as severe PTSD symptoms. All of these contributed to poorer health outcomes. Roh studied 200 Korean-American immigrants using a correlational design. Roh noted it was not just the presence of negative religious coping, but also a lack of positive religious coping (such as forgiveness),

that resulted in higher depression, lower life satisfaction, and poor physical health outcomes. This fits with Worthington's (2006) stress-and-coping theory of forgiveness as decreasing negative emotions and increasing positive emotions. Roh also found that depression might serve as a mediating mechanism between religious coping skills and physical health.

In short, religiosity may be associated with higher self- and other-forgiveness, which aids better mental and physical health (Avery, 2008). However, this hypothesized causal chain is speculative given the nature of research I have reviewed in this section—virtually all correlational designs without any longitudinal research and no experimental designs. While religion and spirituality tend to most often have positive ties with forgiveness and health, this is not always the case. For those people who have negative attachments to religion or spirituality, religious coping might be negative. In those cases, spiritual experiences have the potential to result in poor physical and mental health.

The forgiving personality and health. Though personality traits such as openness and agreeableness are allied to mental and physical health, forgiveness potentially affects mental and physical health outcomes more than do personality factors (Moorhead, Gill, Minton, & Myers, 2012). For example, Lawler-Row and Piferi's (2006), in their aforementioned correlational study, found that trait forgivingness was positively associated with well-being, negatively associated with stress, and depression, and was higher in women (than men), individuals over 60 (relative to younger people), and those who attend church frequently (relative to infrequent church attenders). Other studies, such as Berry and Worthington's (2001) correlational study of 39 college students, found personality traits such as high forgivingness and low anger were linked with happiness in relationships. Trait forgivingness was not only linked to better mental health, but to lower cortisol reactivity and better physical health outcomes.

Another way personality variables may affect health is by affecting social support. Lawler-Row and Piferi (2006) found a forgiving persona led to greater social support, healthy behaviors and spiritual well-being. Those in turn affected health outcomes. Forgiveness and social support both involve the maintenance of relationships. In this way, forgiveness leads to greater physical health, while social isolation and other costs of low trait forgivingness are historically dangerous for individuals and even groups.

Another variable related to trait forgivingness is the reaction following an offense. Couch and Sandfoss (2009) conducted a correlational study with 175 college-aged students. Those who were more likely to engage in personality-based inhibition, defined as personality-based avoidance motivated by anxiety, following a romantic betrayal exhibited negative psychological and physiological symptoms tied to poor physical health outcomes. Thus, the personality-based reaction to an indiscretion, not just how the indiscretion emerges, can affect health outcomes. A person with forgiving tendencies in these situations may prevent this inhibition, and these negative symptoms would never arise.

A victim's perception of his or her transgressor's personality has a strong impact, and this may be more important than the personality the victim. In a longitudinal study of 39 female college students by Tabak and McCullough (2011), perceived agreeableness of the transgressor was tied to higher levels of forgiveness and lower levels of cortisol for the victim. This suggested better cardiovascular health might result from forgiving. However, victims' levels of neuroticism and agreeableness had a small link with cortisol and forgiveness, suggesting that the perceived personality of the transgressor seems to be central to the forgiveness-health relationship rather than certain personality traits of the victim. Thus, it is important for researchers to not only

consider the personality of the victim, but how the victim interprets the personalities of those who trespass against them.

Mental health as a mediator. Forgiveness is tied to several mental health variables that are substantial on their own but also mediate between forgiveness and physical health. To illuminate these relationships, Ysseldyk, Matheson, and Anisman (2009) conducted a pair of correlational studies of nearly 200 undergraduates. They found that forgiveness relates to mental health and subsequent physical health via lower threat appraisals, secondary appraisals, and lower reliance on emotion-focused coping. These result in lower depression and overall better physical health. Louden-Gerber (2009) conducted a longitudinal study of 33 homeless adult males. Participants in the forgiveness intervention group saw a decrease in rumination and an increase in offense-specific forgiveness, social connectedness, and likelihood to forgive in the future. Louden-Gerber (2009) concluded that there may be a relationship among mental health variables such as control of a situation, forgiveness, anger, depression, loneliness, and self-pity with physical health outcomes. These variables and more may mediate the relationship of forgiveness and physical health.

Lawler, Younger, Piferi, Jobe, Edmondson, and Jones (2005) conducted a correlational study examining 82 adults. They concluded that trait forgivingness and state forgiveness are similar in terms of mental health outcomes. Both involve reduced negative affect and stress as avenues to better physical health. The strongest predictor was the reduction of negative affect, but both negative affect and stress at least partially mediated the relationship between forgiveness and health. Trait forgivingness was also correlated with better conflict management, which fully mediated the relationship between forgiveness and health.

Another distinction of forgiveness is found between self and other-forgiveness. Wilson, Milosevic, Carroll, Hart, and Hibbard (2008) conducted a correlational study of 266 physically healthy college students. They found that forgiveness of others may lead to a greater likelihood of forgiveness of self, which, in turn, can boost mental health and thereby improve physical health. Avery (2008) studied 95 college students using a correlational design. Self-forgiveness was tied to better mental health and better social support. The blending of forgiveness of others and oneself resulted in better physical health.

Researchers at times confuse different types of forgiveness. But, regardless, the findings are generally consistent. Whether examining forgiveness at the state or trait level, it is related to better mental health and is an avenue toward physical health. Whether one examines forgiveness of oneself (which is more about being an offender who deals with regret, remorse, guilt, and shame) or forgiveness of other (where one deals with resentment, hatred, anger, anxiety, or depression), mental health variables are affected. Which ones are affected depends on which type of forgiveness one is considering. However, both the regret-remorse-guilt-shame and the resentment-hatred-anger-anxiety-depression constellations elevate mood, enhance mental health, and as a result, affect physical health positively.

Physiological responses as mediators. In addition to the aforementioned unforgiveness literature and its connection with unsavory physiological responses, a number of studies beyond the scope of this review have supported forgiveness' connection to physiological responses as well. Such research posits that those who forgive others tend to have stronger immune systems (Seybold, Hill, Neumann, & Chi, 2001), less physiological reactivity to stress (Lawler et al., 2003; Witvliet, Ludwig, & Vander Laan, 2001), lower blood pressure (Sarinopolous, 2000), and overall fewer physical symptoms (Toussaint, Williams, Musick, & Everson, 2001). This research

has shown the major players in physiological responses related to forgiveness to be stress-related. The specific markers of stress include blood pressure and other measures of cardiovascular functioning and the stress-neurohormone cortisol. Cortisol is also related to cardiovascular functioning as well as to functioning of the immune system, gastrointestinal system, sexual and reproductive system, and brain.

Forgiveness' association with lower levels of cortisol has found support in a number of studies (Berry & Worthington, 2001; Standard, 2004; Tabak & McCullough, 2011). For example, Edmondson (2005) examined 60 female undergraduates in a correlational study of forgiveness and physiological responses. Those higher in forgiveness had lower cortisol levels than those low in forgiveness. Further, state forgiveness surrounding a specific stressor was associated with higher mean arterial pressure when discussing the betrayal. This is consistent with research linking forgiveness and blood pressure.

Mental health and physiological responses as cooperative mediators. In an aforementioned correlational study, Berry and Worthington (2001) examined 39 undergraduates. Personality traits like high forgivingness and low anger indirectly affected cortisol reactivity via relationship variables such as happiness with their romantic relationships. These findings go above and beyond noting forgiveness' association with fewer cardiovascular symptoms and lower blood pressure (Porter, 2004; Sarinopolous, 2000; Toussaint, 2003), by demonstrating cortisol's consistency with two other major themes in forgiveness and health literature previously mentioned: decreasing negative emotions (i.e. trait anger) and increasing positive emotions (i.e. trait forgivingness), as well as the forgiving personality and health. As research begins to integrate these themes, a more complete picture of the relationship of forgiveness and health is revealed.

As such, many mental and physiological variables work together as mediators in the processes which tie forgiveness to physical health. This was noted in a review by Thoresen, Harris, and Luskin (2000), who claimed forgiveness' relationship with physical health would reduce negative states and increase the presence of positive cardiovascular variables and psychosocial variables such as security, social support, and transcendence. Friedberg, Suchday, and Srinivas (2009) conducted a correlational study of 85 cardiac inpatients. They found that by decreasing anxiety and perceived stress, the physiological responses were less and the blood cholesterol was decreased. Those decreases reduced the risk for cardiovascular problems. Thus, better health was tied to forgiveness.

The stress of unforgiveness often results in elevated blood pressure and other physiological indications of stress (e.g., increased heart rate, increased sweat). As a response to stress, generally people freeze (i.e., seek to avoid detection by the threatening person) or flee (i.e., avoid or escape stressful situations), or if neither is possible, attack the stressor or person inflicting the stressor. Harris and Thoresen (2005) conducted a qualitative review of studies on forgiveness and health. They claimed that, with forgiveness, reduced avoidance lowered blood pressure and increased positive affect and behaviors. The consequence was better physical health. Similarly, a review by Lawler-Row and Reed (2008) credited the link of forgiveness and health as involving a drop in blood pressure and an increase in conflict management and well-being, further showing a connection between mental health and blood pressure.

Cardiovascular variables are at the heart of physiological responses to forgiveness. Researchers Lawler-Row, Karremans, Scott, Edlis-Matityahou, and Edwards (2008) studied 141 college students using a correlational design. They found that state forgiveness and trait forgivingness both impacted cardiovascular responses in neutral periods and periods of recalling

a transgression. Lower levels of expressed anger accounted for the relationship between trait forgivingness and heart rate responses, but styles of anger did not account for forgiveness and health relationships at large. For this reason, the authors insist that a simple portrait of forgiveness, style of anger, and health is incomplete. The inclusion of decreased anxiety, depression, and stress associated with forgiveness may better explain cardiovascular problems, including blood pressure, heart rate, and cholesterol (Friedberg et. al., 2009).

A recent physiological explanation by Witvliet (2005) unifies mental and physiological responses in regards to forgiveness and health. She claims that forgiveness might either calm sympathetic nervous system's "fight or flight" responding or initiate parasympathetic nervous system responding – depending on whom you ask. Simultaneously, the reduction of anger, which is so crucial to the forgiveness process, reduces the sympathetic nervous system's response (or increases the parasympathetic nervous system's response), and the combination of these two nervous system responses invites better health outcomes. In this way, forgiveness' link to health may stem from the emotional regulation of the "fight or flight" response.

Clearly, strong evidence of mental and physiological interactions supports that forgiveness and health are connected. In order for such an interdisciplinary construct as forgiveness to affect physiological symptomology, the mechanisms therein must walk the line of the mind/body connection. In other words, in order for a non-physiological construct to influence a physiological construct, it stands to reason (with empirical support) that some combination of physiological and non-physiological constructs is the bridge between the two.

Forgiveness and health in rehabilitation populations. A notably large subset of forgiveness and health research has been done on people undergoing rehabilitation for physical problems. Researchers in such cases seem to have front row seats to the relationship between

forgiveness and health. When rehabilitation follows some kind of human mistake or unfair circumstance, the role of forgiveness is crucial (Webb, 2003).

Past studies of rehabilitation populations about forgiveness and health share a similarity to those of the general population. For example, forgiveness of self, which has improved physical health via mental health, mirrors effects in an aforementioned study sampling those in outpatient physical therapy (Svalina & Webb, 2012). Additionally, Webb, Toussaint, Kalpakjian, and Tate (2010) studied 140 adults with spinal cord injuries. The type of forgiveness—of oneself or of another person—affected the link between forgiveness and health, as I argued earlier. Self-forgiveness is more about being an offender than a forgiver, and it reduces emotions like regret, remorse, self-blame, guilt, shame, and self-condemnation. Forgiveness of other is aimed at reducing anger, resentment, bitterness, anxiety, and depression. Webb et al. (2010) found that, in a population of problem drinkers, forgiveness of self was found to be more difficult than forgiving others. However, it had bigger effects on health than did forgiveness of other people (Webb & Brewer, 2010).

From the rehabilitation literature, one can conclude that forgiveness is as vital in dealing with enduring physical ailments as it is in terms of preventing these ailments. For this reason, forgiveness research's expansion into rehabilitation publications is a welcome progression.

Does health influence forgiveness? The vast majority of the studies in this review have been correlational, with an underlying assumption that forgiveness is inducing health. Few studies have shown a bidirectional impact, with health prompting forgiveness. For example, quasi-experimental study of 65 college students by Rashid (2004) examined the impact of positive psychology coursework on character strength and development. Connections between several strengths (e.g., intimate attachment, kindness, leadership) and forgiveness were mediated

by peak physical health. Life conditions, including social support, health, spirituality, and life satisfaction all predicted particular strengths. This suggests forgiveness, as well as strengths in the social, religious, and personality realm, are stronger in those who are in good physical health than in poor health.

Physical activity is viewed as a helpful coping mechanism (Browne, 2009). Given the recent surge of research beyond this review on the positive health benefits of exercise, from emotional and neurological viewpoints (e.g., Lowry, Lightman, & Nutt, 2009; Strohle, 2009), physical exercise may, as is forgiveness, be related to a reduction in negativity and an increase in positivity. As important as healthy coping mechanisms appear to be in the relationship between forgiveness and health, physical activity deserves more attention in the current research.

Physical health in forgiveness interventions. Intervention studies may find a cause and effect relationship of forgiveness to health and enough is known at this point to merit their use (Root & McCullough, 2007). For example, a quasi-experimental study of 19 elderly individuals determined that after using Enright's therapeutic model of forgiveness, participants showed long-term increase in forgiveness and reduced depression, and short-term improvements in physical health (Dayton, Campbell, & Ha, 2009). It makes sense that short-term health benefits might be related to enhanced state forgiveness. In a particular situation, forgiveness benefits should not be expected to be as lasting as they might be in a situation that taps into trait forgiveness.

This type of conclusion can be justified by viewing the process of a forgiveness intervention, where health was found to fluctuate (Browne, 2009). According to the 11 adult participants in Browne's (2009) qualitative study, moving through a process of forgiveness is a struggle. It can involve adverse health effects, but it often reduces health ailments in the end. Long-term effects support past research. Unforgiveness invited physical ailments, and common

positive physical health responses were tied to forgiveness. Just knowing that they may reap health benefits was motivating for participants to continue.

Forgiveness intervention studies provide insight into the directionality of the forgiveness and health relationship. For example, one forgiveness intervention designed for children, targets a very real threat to physical health—bullying. This quasi-experimental study involved 81 elementary school students. Turner (2009) found that forgiveness can stop or prevent bullying from affecting physical health, thus giving a potential directionality in the forgiveness and health relationship. Additionally, the importance of forgiveness interventions as preventative measures is capitalized, not only for promoting good behavior, but for protecting mental and physical health.

When forgiveness is not healthy. Not all studies demonstrate a relationship between forgiveness and physical health (Edmondson, 2005; Hernandez, 2006), principally in terms of other-forgiveness (Avery, 2008; Cloud, 2007). For instance, in a study of victims of violent crime victims beyond the scope of this review, forgiveness failed to aid trauma-related distress or post-traumatic symptom severity, suggesting that some sources of anger are unresponsive to forgiveness-based interventions (Connor et al., 2003).

Some studies, including one correlational study of 107 adult divorcees, have found forgiveness was not linked to lower depression or anxiety, let alone physical health, claiming denying the hurt was a healthier coping mechanism than forgiveness (Putnam, 2001). Denial as a substitute to forgiveness has mixed reviews, as other research suggests those who use denial as a coping response to being discriminated against suffer from significantly higher blood pressure than those who contest unfair treatment (Harrell, Hall, & Taliaferro, 2003; Krieger & Sidney, 1996).

Some studies link forgiveness to physical health, in a negative sense. Toussaint et al. (2001) surveyed a nationally representative sample of nearly 1500 adults. Across all age groups, those with a greater tendency to seek and grant forgiveness were at a greater risk for psychological distress. The authors suggested that people who a) take the relational risk of suggesting forgiveness, b) may not be genuine in their search for forgiveness, or c) are high in neuroticism or low in self-esteem would endure poor mental health outcomes such as anxiety and rumination and the related negative health outcomes. However, it is possible that this psychological discomfort may be a short term drawback with long term social, psychological, and physiological benefits. More research must examine forgiveness in terms of physiological ups and downs in this process.

A frequently cited danger of granting forgiveness involves placing oneself at risk for an offender perpetrating later injustice and abuse. Forgiveness has few positive health benefits when the victim is being abused. In fact, there is potential for physical or psychological injury—or both. According to a review by Lamb (2002), framing forgiveness as a chance for healing can be harmful for women suffering domestic abuse. It can add pressure for the woman to forgive rather than deal with the injustice directly. Preserving an unhealthy relationship can continue danger, not only of further abuse, but also for harmful results of anger suppression. Other physical health risks might also attend staying in an abusive relationship. The anger of abuse victims should not be viewed solely as unhealthy, and forgiveness should be considered in relation to its social costs, not just its intrapersonal effects.

Even in interventions, problems were found in forgiveness (Vas, 2002). Neither expressive writing about interpersonal offenses nor emotional experiences were positively linked to forgiveness. In fact, in an intervention study of 150 college students, the interventions

maintained rumination. Vas (2002) noted that structured expressive writing of an offense may invite healthful forgiveness. It seems when people are left to their own devices, they will write about the offense as they have seen it before, and this only fuels their contempt, instead of creating a healthier viewpoint. One must remember that not all dimensions of forgiveness are associated with any particular aspect of health, and it is important to efficiently focus on relevant points of intervention.

Another subset of research argues the beneficial findings of forgiveness suffer from methodological problems, which have been overlooked in the conclusions made by forgiveness researchers. For example, a review by Koenig (2008) claims that basing conclusions off of variables that are correlated with one another leads to misguided research, particularly within the realm of spirituality. Specifically, Koenig notes that constructs such as forgiveness and optimism, while tied to spirituality, are wrongly used to measure spirituality. Such inappropriate generalizations from variables that are related to spirituality itself present the potential for making bad inferences. Caution should be taken when interpreting research in which questionable interpretations have been made.

It is clear that forgiveness is not always warranted. Like many virtues, forgiveness has the most beneficial outcomes when used appropriately. People endure many offenses in their lives, but there may be other helpful ways to cope than by forgiving. Richards (2002) suggested that an inappropriate method of healing may cause the victim to miss better prospects for healing. Our duty as scientists is to find the benefits and drawbacks of each intervention.

Summary. Many of the various pathways of the forgiveness and health relationship fall into one of eight categories: the effects of unforgiveness, increasing positive experiences and decreasing negative experiences, developmental processes, religion and spirituality, personality,

mental health, physiological responses, and the combination of mental health and physiological responses. Promising mediators in this relationship include decreasing negative affect, stress, anger, rumination, depression, and anxiety and increasing positive affect, social support, positive spiritual experiences, positive religious coping. Other mediators of forgiveness-health connections involve changes in physiological responses (e.g., blood pressure, cortisol, sympathetic nervous system responses, and parasympathetic nervous system (or vagal tone) responses). Self, other, trait, and state forgiveness have all shown similar, yet distinct relationships with physical health. The directionality of the forgiveness and health relationship is not yet certain, though forgiveness interventions have shown a potential to decide whether a unidirectional or bidirectional relationship significantly exists, if at all. Forgiveness may not be effective or adaptive in every situation, so other healthy coping mechanisms must be researched and compared.

Discussion

Forgiveness and health research is in an exploration stage. Most researchers agree that any link between forgiveness and health involves indirect multiple mediators that, in combination, explain the relationship. A range of likely mechanisms have been noted, and have yet to have their associations placed into directional models. As the research moves forward, limitations of the past and possibilities of the future need to be taken into account so that the most efficient research can be conducted.

Limitations. Samples used in research on forgiveness and health have over-represented female, Caucasian young adults. These people are usually healthy, making it difficult to note differences in health due to forgiveness (Porter, 2004). Naturally, external validity and

generalizability also make it hard to draw sweeping conclusions from findings using these populations.

Some of the earliest research in the present review noted a need for psychometrically sound measures of forgiveness (McCullough & Worthington, 1994). However, over the 20 years covered by this review, the assessment of forgiveness has improved. Notably accurate and psychometrically sound measures have been developed and used such that forgiveness measures are functional, even without a common definition of forgiveness (Worthington et al., in press). Recently, physiological measures have been used to assess constructs that could not otherwise be measured, such as blood pressure and heart rate. The inclusion of behavioral measures in future research will offer a more objective base for forgiveness and health research. For example, requiring a doctor's physical as opposed to or in combination with a self-report health measure invites higher credibility for a study aiming to reveal changes or associations with health.

Despite a plethora of effective interventions for forgiveness, such as Worthington's REACH program (2003) and Enright's (2000) process model of forgiveness, few interventions are used in this body of research on forgiveness and physical health. Both operationally and content-wise, this limits evidence on causation and directionality. Truly valuable content could be gleaned from intervention data, yet few studies exhibit any kind of manipulation.

Research agenda. Nearly every study examined in this review noted that future research must include longitudinal and experimental studies with more generalizable populations. To do this efficiently and with credibility, one might argue that a decisive definition of forgiveness is needed (Stammel & Knaevelsrud, 2009). In which case, researchers would determine whether a definition of forgiveness can work for all belief structures, and then settle on a common definition for more valid inquiries (Denton & Martin, 1988). However, many researchers (e.g.,

Worthington, 2005) believe that general consensus already exists among forgiveness researchers. Even if it doesn't, another perspective is that a variety of definitions of forgiveness would reveal different facets of the construct. Thus, it might be the case that the field would progress more by not having a consensus definition.

Future directions in developmental psychology. The linear effect of age and development on the relationship between forgiveness and health has been well established (Sarinopolous, 2000; Toussaint, 2003). Forgiveness also aids health in decline, as one can learn to accept and forgive one's body for failing (Brink, 1985). Future studies must identify developmental changes in general, as well as in specific developmental topics such as cohort racial attitudes and forgiveness (Knight, 2003) and successful aging (Lawler-Row & Piferi, 2006).

Most forgiveness studies failed to control the time and severity of the offense. Developmentally speaking, some offenses have greater impacts at certain points in life. For example, being cheated on by a boyfriend or girlfriend of six months has different effects on forgiveness and health than being cheated on by a spouse of twenty years. However, also stage of development can make a big difference. A teen dealing with a cheating date partner who is a first love might be devastated, but a divorced person with multiple past experiences with cheating partners might not be nearly as hurt by a cheating date partner in a relationship of the same duration and seriousness. Given the influence of development on forgiveness and health, health research with this kind of control over possible confounding variables is very important for future studies.

Future directions on potential mediators. Many of the studies in the present review noted several potential mediators that should be studied in future research. Some of these include

positive religious coping (Witvliet et. al., 2004), the relationship of the victim and the transgressor, the nature of the offense (Lawler et. al., 2005), cognitive flexibility (Lawler-Row & Reed, 2008), gender differences, empathy, self-blame, self-doubt, poor coping skills, poor social support, insecurity, and narcissism (Avery, 2008).

Most importantly, future research regarding mediators needs to be comprehensive. Forgiveness is such an expansive concept; many variables may impact its relationship to health. Researchers must explore a broader assortment of associations to expand knowledge of this subject. A simple replication of what has already been established, such as the reduction of negative affect, is not enough. The process needs to be manipulated, tested multi-modally, and dissected so that no stone is left unturned in understanding how it works.

Future research in religion. Despite forgiveness' strong foundation in religion, many questions remain in this context. For instance, early research noted a need for future studies to explore forgiveness and health factors of highly religious people, compared to more secular people (Coates, 1997). More research is also needed on how religious values and church rules, with an emphasis on forgiveness, affect the health of their followers (Quenstedt-Moe & Popkess, in press).

Religion may also be implicated when forgiveness fails. What is it like for a religious person to fail to forgive? Does religion still maintain its benefits in that situation (Lawler-Row, 2010)? Another interesting facet of religion that warrants analysis is feeling forgiven by God. Could there be health benefits in the relief of feeling forgiven, by each other and by God? Future research may reveal the forgiveness and health relationship by exploring not only successful forgiveness, but its attempt and its failure as well.

Future research in personality. One of the most difficult things about generalizing forgiveness research is that substantial individual differences exist in forgiveness. These differences in forgivingness and anger should be considered when researching and intervening (Berry & Worthington, 2001), and the forgiving person's personality should be more closely examined (Toussaint & Webb, 2005).

State forgiveness and trait forgivingness need to be studied further, too (Porter, 2004). The impact of state versus trait forgiveness on health may show differences, giving researchers a better idea about whether personality or the situation accounts for greater variance in the forgiveness and health link (Harris & Thoresen, 2005).

Future research in mental health. One important avenue regarding mental health as a mediator of forgiveness and health is self-forgiveness, which has only recently been starkly differentiated from other-forgiveness. Past studies have hinted that the two may contribute to related but distinct outcomes (Louden-Gerber, 2009; Rivard, 2005; Standard, 2004). Both self and other forgiveness involve taking less offense from a transgression, taking more responsibility for how one feels, and positively changing one's perception, feelings, and behavior (Luskin, 2002). These and other correlates of self and other forgiveness, including personality and religious factors, should be studied extensively in the future as causative to the mental state, which mediates forgiveness and physical health.

Forgiveness and social support both involve the maintenance of relationships and in this way, might enable greater health. Because social support has been established as a likely mechanism in the link between forgiveness and mental health, it may not seem worthy of extensive future investigation. However, social support should not be forgotten in the context of self-forgiveness, where little research has been conducted.

A final suggestion for mental health research involves a generalization of forgiveness to other mental health strengths. Does enhancing one strength, such as forgiveness, make it more likely that other strengths will be enhanced? The effects of strength enhancement on every day functional outcomes, including interpersonal conflict, should be examined in future studies (Rashid, 2004).

Future research in physiology. With a few exceptions, the neuropsychological mechanisms of forgiveness have been less investigated than some other aspects of forgiveness and health (Tsuang, Eaves, Nir, Jerskey, & Lyons, 2005). Twin studies, for example, may show genetic effects on forgiveness that aid health outcomes. Worthington and Sotoohi (2010) have reviewed the research on the physiology of forgiveness, illustrating the potential for growth in this area of study. They identified nine studies of peripheral physiology, four of cortisol, one DNA, two brain scanning studies, and one study of immunology. They also reviewed two intervention studies examining forgiveness and health. In the three years since that review, other studies have been forthcoming. Future studies of this persuasion should examine how the neurobiology of other emotions, such as the six basic emotions, compares to that of forgiveness (Farrow & Woodruff, 2005).

In health research, it is vital that future studies control for other health factors, such as smoking and drinking (Lawler-Row et. al., 2011). Other topics tied to existing research, which justify more attention, include the analysis of blood pressure and heart rate in smaller increments for the sake of accuracy and revealing causation (Lawler-Row, 2008).

All in all, it is good to continue the investigation of potential physiological mediators, instead of regarding these reactions as something to be held as a correlate of forgiveness. Hormonal, central nervous system, peripheral nervous system, and behavioral measures should

all be used in future research to insure all potential physiological response outcomes have been noted in relation to forgiveness (Witvliet, 2005).

Future research in intervention and directionality. Studies that reveal the directionality of the forgiveness and health relationship have been suggested since this research began, yet so few have been conducted. While it is assumed that the any effect moves from forgiveness to physical health with some mediators and moderators in between, research in the opposite trend is recommended. Does physical health affect forgiveness? Only two studies in this review found results which may support that claim (Browne, 2009; Rashid, 2004).

Forgiveness interventions may reveal the directionality in this relationship. The process of the forgiveness intervention should be measured alongside physiological indices to see whether any part of forgiveness has greater health implications (Hernandez, 2006). They should be related to anger-reduction mechanisms in terms of physical health, mental health, and level of forgiveness (Enright, 2001). Studies such as these would offer insight into the reduction of negative states versus increase of positive states and how they affect physical health outcomes.

Forgiveness interventions should also be examined to reveal what happens when forgiveness is achieved and not achieved (Sarinopolous, 2000). Does avoiding the stress of going through forgiveness preserve wellness for the short-term (Moorehead, Gill, Minton, & Myers, 2012)? Interventions should be used in future studies to answer these questions that will provide more valuable information than correlational and cross-sectional studies in terms of the direction of effects.

The need for research. Hopefully, the size of the relation between forgiveness, health and the inner mechanisms will be revealed in future research (Toussaint & Webb, 2005). This

may sound like a daunting task, given all of the recommendations by past research, but to put things in perspective, in 1994, McCullough & Worthington suggesting the following:

- the link between forgiveness and health should be further explored
- forgiveness should be examined in the context of depression, anger, well-being, self-efficacy, and relationship adjustment with experimental, longitudinal, and natural correlational studies ----forgiveness interventions need to be researched, validated, and compared to other interventions
- better measures of forgiveness are needed
- theories of forgiveness should be formulated to help conceptualize what leads to and follows forgiveness.

In fewer than twenty years, much of this agenda has been accomplished. Thus, the future research agenda should be embraced optimistically, as the past indicates the progression of forgiveness research.

Conclusion

Forgiveness connects religion, biology, society, and “the good life.” The mechanisms at work within and beyond forgiveness are intrapsychic, interpersonal, and moral, and further mechanisms beyond the scope of this review may have cultural and political undertones (Rafner, 2008; Worthington & Scherer, 2004). Early works on forgiveness appeared in journals about religion and theology, but now are found anywhere from conflict resolution to rehabilitation psychology journals. This reveals the flexible nature of forgiveness, as well as its complexity.

Current research demonstrates a strong link between forgiveness and mental health, but the size of the relation as well as its mechanisms remains elusive (Toussaint & Webb, 2005). It appears the major players in the forgiveness and health relationship are: decreasing negative

things (stress, anger, rumination, and depression) and increasing positive things (affect, social support, positive spiritual experiences), and physiological responses (blood pressure, cortisol, parasympathetic and sympathetic nervous systems).

Like anything worthwhile, one cannot rush forgiveness or it will not mean anything; it must be experienced in order to work effectively through one's pain of being hurt or offended (Fisher & Exline, 2006). This exercising of the human condition and strengthening of relationships and the self through forgiveness is what brings a greater richness to the quality of life that is so intertwined with physical health.

Statement of the Problem

Given the vast array of advantages to embodying virtues, such as the potential for better physical health outcomes as demonstrated in the review of the literature, one can see why their promotion is of interest in psychology. But in order to truly grasp the importance of promoting virtues, I considered the negative impact of their opposites on society. For example, the opposite of forgiveness is, of course, unforgiveness. Unforgiveness has been shown to be linked with rumination, anxiety, depression, bitterness, fear, resentment, anger, and interpersonal stress (Worthington et. al., 2007).

The other opposites of the chosen virtues (humility, patience, and self-control) are pride, impatience, and low self-control. Each of these also has their fair share of consequences. Pride leads to disengagement from others (Rodriguez-Mosquera, Manstead, & Fischer, 2000), and impatience is linked to lower social competence and less ability to cope with stress and frustration (Mischel, Shoda, & Rodriguez, 1989). The large body of research on self-control tells us that low levels increase behaviors that are risky to themselves and to others, such as drinking and gambling (Arneklev, Grasmick, Tittle, Bursik, 1993). And broadly, negativity (the opposite

of our other chosen construct, positivity) can have such ill effects as high blood pressure, bitterness, anger, depression, anxiety, and even sore muscles (Fredrickson, 2009).

These troubling findings have been detected in society and can be examined at length with statistics provided by Centers for Disease Control and Prevention (CDC, 2011). The CDC reports record-breaking rates of such health problems as binge-drinking and obesity that influence individuals' economic well-being and work productivity. For example, one in six Americans goes on a drinking binge at least once per month, which translates into eight or more drinks, usually four times per month. This costs \$224 billion dollars per year in lost work productivity, alcohol-incurred medical expenses, law enforcement, and automobile accidents. This is just one of many targets for virtue promotion (in this case, self-control).

In light of the present study's three fundamental research questions [(1) can take-home, workbook-based interventions aimed at promoting four separate virtues actually promote those virtues? (2) will changes beyond the target virtue occur after completing such a workbook? and (3) will participants endorse the effects of the workbook because of actual virtue-relevant changes, or just because the workbooks promote a more positive way of looking at life?], I highlight existing intervention research surrounding the virtues in question, as well as the needs therein.

Forgiveness

Forgiveness is defined as “a process that leads to the reduction of unforgiveness (bitterness, anger, etc.) and the promotion of positive regard (love, compassion, or simply sympathy and pity) for the offender” (Wade & Worthington, 2005, p.160). Identified as a warmth-based virtue, one can recognize forgiveness as distinct from its conscientiousness-based

counterpart, reconciliation, which is a social behavior aimed at restoring peace with another, rather than an internal process.

Research in forgiveness has developed exponentially in recent years, and there have been about a dozen interventions researched and published over the last twenty years (Wade, Worthington, & Meyer, 2005). A meta-analysis conducted by Wade et al. (2005) revealed that these interventions usually emphasize the following: defining forgiveness, helping clients to remember the hurt of the transgression, building empathy toward the offender, helping clients to achieve this empathy by identifying their own past offenses, and encouraging commitment to forgive the offender. A more recent meta-analysis (Wade, Hoyt, & Worthington, 2012) suggested the utility of many such interventions, but Worthington's REACH Forgiveness intervention (2003) was one of two that stood out as a major player in the field of forgiveness interventions. Thus, the forgiveness intervention workbook was based on the REACH Forgiveness intervention.

Humility

Humility is "honest self-evaluation, that is characterized by other-oriented, prosocial, altruistic motives, modesty, willingness to honestly accept strengths and weaknesses, and not act or feel prideful, arrogant, or narcissistically entitled" (Worthington, 2008; see also Davis, Worthington, & Hook, 2010a). Another warmth-based virtue, humility too has a conscientiousness-based counterpart in modesty, which is more of a presentation style than an internal process (Davis et al., 2010a). Humility can be differentiated by its five main tenets, identified by Tangney (2005): acknowledging limitations, openness to ideas, perspective of abilities and achievements within the big picture, low self-focus, and value of all things.

Humility is often a necessary component for any kind of breakthrough, particularly in terms of an intervention, when one must abandon pride and embrace help from another person (Breggin, 2011). And yet, no humility intervention exists. However, research suggests that accurate perceptions, self-transcendence, and a willingness to decrease one's own self-evaluations are possible (Park & Seligman, 2004). Potential aspects of humility promotion to include in the workbook intervention include: acknowledging accuracy regarding self-strengths and limitations, inducing states of awe for things greater than/beyond the self, performing menial tasks, seeking forgiveness for one's transgressions, recording thoughts of gratitude daily, and furthering close relationships (Park & Seligman, 2004).

Patience

Patience is perhaps the most understudied of the virtues in the present study. A conscientiousness-based virtue, it is defined as “engaged acceptance of enduring unpleasant conditions” (Stokes, 2011, n.p.) Though there is little research in on this conscientiousness-based virtue, five aspects of patience have recently been brought to lights: perseverance, tolerance of boredom, serenity, patient listening, and comfort with delays (Stokes, 2011).

As you might have guessed, there are no known empirical interventions for promoting patience. However, my working definition of patience (above) eerily corresponds to that of mindfulness, “a greater tolerance of unpleasant states” (Brown, Ryan, Creswell, & Niemic, 2008, p. 78). This relatedness suggests that including mindfulness based intervention strategies such as mindful movement, body scanning, and sitting meditation could be very helpful in the workbook intervention. Further, Schnitker (2012) suggests including activities which divert attention from temporal orientation, enjoying the present moment, viewing the past positively, coping with restraint, and practicing open-mindedness and flexibility.

Self-Control

Self-control is widely acknowledged as the control of the impulses of the self (Baumeister & Exline, 1999). Referred to as “the master virtue,” self-control is often at the helm of exercising a wealth of other virtues (Baumeister & Exline, 1999, p.1170). Speaking of exercising, Baumeister and Exline identify self-control as “the moral muscle,” due to its tendency to deplete with overuse and its need to be exercised regularly in order to be effective (p.1189). This conscientiousness-based virtue is often used interchangeably with self-regulation, though self-regulation can be seen as a broader construct.

While interventions in self-control are many, especially in the domains of weight loss and substance abuse management, no general self-control interventions exist (Frieze, Hoffman, & Wiers, 2011). However, it is widely accepted that one of the key components of successful self-control interventions is self-monitoring, thus this will be prominent in the formation of the workbook intervention (Quinn, Pascoe, Wood, & Neal, 2010). Often, behavioral self-control is seen as a prerequisite for mental self-control, as it provides a base of self-monitoring, contingency management, and stimulus control (Mahoney, Thoresen, & Danaher, 1972). This too will be taken into account in the intervention, promoting the exercise of the moral muscle of self-control.

Positivity

What might of these virtues have in common? Virtues have a moral component, aimed at achieving a greater good that often results in a positive experience. However, positive experiences can exist without morals or virtues. The underlying positivity deeply planted within not only the selected four virtues, but within all virtues, suggests a potential confounding variable. If the four interventions promote change, who’s to say that it hasn’t just promoted

general positivity? For this reason, the present study includes a positivity condition and therefore, a workbook to promote it.

Positivity “reigns whenever positive emotions – like love, joy, gratitude, serenity, interest, and inspiration – touch and open your heart” (Fredrickson, 2009, p.16). Like many virtues, positivity is more than simply the absence of something negative, but the addition of something enriching and meaningful. Like virtues, positivity is implicated in many desirable qualities, such as the ability to make life meaningful and the soundness to make good judgments (Hicks, Cicero, Trent, Burton, & King, 2010). However, because positivity is an emotional orientation and not a virtue, it can serve as a related yet distinct control condition. As many people have experienced, happiness does not always equate to goodness (Seligman, 2002).

The relationship between positivity and virtue is controversial. The dominant theory of positivity, Fredrickson’s “broaden-and-build” theory (2001), describes positivity’s facilitation of building “new skills, new ties, new knowledge, and *new ways of being*” (2009, p. 24). This informs the current study in that a new way of being can, for some, be a more virtuous way of being. Thus, positivity has the potential to serve as a catalyst for virtue. Conversely, Seligman’s appropriation of Aristotle’s concept (2002) of authentic happiness posits that *eudaimonia*, or virtue for virtue’s sake, not only precedes but is *necessary* to achieve true positivity about one’s life and works. The current study will examine this relationship.

While no general positivity interventions exist, Fredrickson (2009) makes many suggestions for promoting positivity in one’s life. These include: reducing negativity, searching for meaning, savoring that which is good, counting your blessing, being kind in relationships and deeds, dreaming positively about the future, exercising your strengths, and connecting with

nature. Activities related to these will certainly find their way into the workbook intervention for positivity.

Workbook Interventions

As demonstrated in this section, the state of intervention research among virtues is lacking at best. However, it is possible that one-on-one interventions between client and therapist may not be the best method for promoting virtues. Kazdin and Rabbitt (2013) describe the state of one-on-one intervention in psychology as often falling short of reaching those who need it the most, calling for novel methods of intervention that can be widely and more easily disseminated. Among these methods are workbook interventions. Self-completed workbooks have demonstrated their utility in many areas of psychology, including depression and anxiety (e.g. Craske & Barlow, 2005; Gilson, Freeman, Yates, & Freeman, 2009), but never in positive psychology. Though research in the empirical study of virtue is young, the existing knowledge of virtues provides a strong foundation for the formation of virtue-promoting workbook interventions.

Purpose of the Present Study

In light of this previous research, I conceptualized the three fundamental research questions within the framework of positivity psychology, which emphasizes the importance virtue and positive emotional states in leading a meaningful life (Tan, 2006). Positive psychology focuses on building strengths so that one can flourish across domains for a more purposeful and meaningful life.

Since virtues *are* strengths of character, creating successful interventions for promoting virtues provides a valuable addition to current virtue research and a foundation for future research in instilling these values in our society.

In general, then my goal to learn more about promoting virtues in order to help people be good and virtuous when they want to be, both for their own well-being and in the interest of others. Previous research on virtue-promoting therapy, psycho-education, and awareness have all been researched to some degree, but to truly make an impact on society, the population needs to be able to make these changes themselves. The wide dissemination of successful virtue-promoting interventions could have an enormous positive impact our social climate. Providing virtuous direction is a healthy and often pleasant experience, which resonates not only within the individual but outward toward society. As aforementioned, development of many virtues has been shown to improve relationships and increase empathic thoughts and behaviors, promoting a ripple effect that can hopefully be sustained through this intervention research. Our stressed, depressed, and overworked society could certainly use it.

Hypotheses. Based on the three research questions and the available research in related areas, I formed the following hypotheses: (1) workbook-based interventions aimed at promoting four separate virtues will indeed promote those virtues, (2) there will be differential effects on outcome measures over time based on condition, and (3) workbook-based interventions aimed at promoting four separate virtues will promote those virtues significantly more than a general positivity intervention condition, but both will be better than a control condition. A very thorough method accommodated for the ambitious nature of these hypotheses.

Method

Forming the Interventions

As briefly mentioned previously, I formatted each of the five workbook interventions with the common goal of promoting the virtue in question: forgiveness, humility, patience, self-control, or the non-virtue control, positivity. Because these workbooks had never been used in

empirical research before, I sent workbooks to experts in the field for revision and suggestions as a validity check, and each expert is a co-author of the workbook. I also pilot-tested workbooks on 30 undergraduate students, soliciting their degree of interest, time to completion, and suggestions for improvement. I will discuss workbook content further in the procedure section.

Participants

A convenience sample from the psychology curriculum at a large mid-Atlantic university yielded 208 participants. Forty participants across the five intervention conditions chose to discontinue their participation in the study following their assessment at Time 1, leaving 168 participants for analysis. Participants were randomly assigned to one of six conditions: forgiveness ($n = 30$), humility ($n = 26$), patience ($n = 28$), self-control ($n = 24$), positivity ($n = 27$), and a non-action control condition ($n = 33$).

The total sample ranged in age from 17-48 ($M = 21.38$, $SD = 4.27$) and was 76.79% female and 23.29% male. Ethnicities of participants were 49.4% Caucasian/White, 28% African American/Black, 6.5% Hispanic, 7.1% Asian-American, 1.2% Native American, and 7.7% Other.

Measures

Demographic information. A demographics data page included single-item questions concerning age, sex, ethnicity, and year in school (see Appendix B for copies of all measures).

Trait measures. Because I was interested in lasting changes over time, the following *trait* measures were administered to assess change in dispositional virtue. Higher scores on these scales indicate higher levels of the construct.

Trait Forgivingness Scale (TFS; Berry et al., 2005). To complete the TFS, participants scored ten items on a 5-point rating scale relating to their likelihood to forgive. It includes such

items as “I have always forgiven those who have hurt me.” Cronbach’s alphas for this measure range from .74-.80.

Values in Action Inventory of Strengths – Modesty/Humility Scale (VIA-IS; Park & Seligman, 2004). The Modesty/Humility Scale is a nine-item subtest within the VIA-IS, a well-known inventory for assessing constructs of positive psychology. Items such as “I don’t act as if I’m a special person” are scored on a 5-point rating scale. Cronbach’s alpha for this scale is .70.

Patience Scale (PS-10; Schnitker & Emmons, 2007). In order to assess trait patience, participants completed ten items of the PS-10. Items such as “In general, waiting in lines doesn’t bother me” are ranked using a 5-point rating Scale. The Cronbach’s alpha for this measure is .78.

Brief Self-Control Scale (Brief SCS; Tangney, Baumeister, & Boone, 2004). The Brief SCS is a 13 item measure, in comparison to its full 36-item counterpart, the Self Control Scale. The Brief SCS measures trait self-control using a 5-point scale rating such items as “I am good at resisting temptation.” Cronbach’s alphas for the Brief SCS ranged from .83-.85.

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Participants were asked to complete the twenty-items of the PANAS according to emotions they generally feel on a regular basis. Each item is simply an emotion, such as interested, distressed, or excited, and participants rated using a 5-point rating scale the extent to which they generally feel those emotions in their everyday lives. Cronbach’s alphas for this measure have ranged between .84-.90.

See Appendix B for all measures.

Intervention workbooks. I created five intervention workbooks as the independent variables, each based on promoting either forgiveness, humility, patience, self-control, or positivity. I based the format of workbook was on Worthington’s (2003) REACH Forgiveness

intervention, adapted to workbook form. I controlled all style variables within the workbooks so that only the content would vary, and all exercises paralleled in style. This highly controlled format will strengthen confidence in any differences in outcome variables caused by the workbooks in promoting their target virtues.

Each workbook is based on a five-letter acrostic used to guide the participant through the steps to promoting the target virtue. The workbooks are divided into eight sections and are roughly eighty pages long. The first section of each workbook contains two to three self-monitoring assessments of the participant's experiences with that virtue. These are not intended to be scored or incorporated into data analyses, but rather as self-monitoring assessments which help to engage participants in their experience with that particular virtue.

Sections two through seven provide steps for promoting the virtue, each section including around ten engaging activities and exercises that are multimodal in nature. Such activities include defining and describing the virtue, watching and responding to provided YouTube videos which portray the virtue, describing experiences with the virtue, drawing representations of the virtue using Paint, and identifying pop culture references related to the benefits of the virtue.

Section eight is composed of identical self-monitoring assessments as section one, so that the participant can gauge his or her progress. Again, these assessments are not intended for measurement purposes, but for the benefit of the participant.

Forgiveness workbook. The workbook intended to promote the warmth-based virtue of forgiveness is based on Worthington's REACH Forgiveness model (2003). Participants are guided through a version of REACH that has been adapted for individual use in a workbook, and each section focuses on one of the five steps (Recall, Empathize, Altruism, Commit, and Hold On) that have empirical support for fostering sustained forgiveness. These steps are engaged in a

variety of methods, including responding to YouTube videos which exhibit forgiveness, drawing representations of forgiveness using Paint, and identifying pop culture references related to the benefits of forgiveness.

The workbook begins with instructions and self-monitoring assessments intended to focus the participant on his or her experience with forgiveness. These assessments include the Transgression-Related Interpersonal Motivations Inventory (TRIM; McCullough, Rachal, Sandage, Worthington, Brown, & Hight, 1998), single-item assessments of emotional and decisional forgiveness, the Emotional Forgiveness Scale (EFS; Worthington, Hook, Utsey, Williams, & Neil, 2007), the Decisional Forgiveness Scale (DFS; Worthington et al, 2007), and the TFS (Berry et. al, 2005).

Six sections, roughly ten exercises each, then define forgiveness and engage the participant through the REACH model. At the end of the workbook, an identical group of assessments is given so that the participant can get an idea of his or her progress.

Humility workbook. This workbook paralleled the forgiveness workbook for participants in the humility (warmth-based) condition. The activities include those similar to the activities in the REACH forgiveness workbook, engaging participants in a variety of humility-promoting exercises, such as those previously mentioned for forgiveness. The humility acrostic is PROVE; Pick a time when you were not humble, Remember your abilities within the big picture, Open yourself, Value all things, Examine limitations.

The workbook begins with instructions and self-monitoring assessments intended to focus the participant on his or her experience with humility. These assessments include the Relational Humility Scale (RHS; Davis, Hook, Worthington, Van Tongeren, Gartner, Jennings,

& Emmons, 2010) and the Spiritual Humility Scale (Davis, Hook, Worthington, Van Tongeren, Gartner, & Jennings, 2010).

Six sections, roughly ten exercises each, then define humility and engage the participant through steps to promote humility, after which an identical group of assessments is given so that the participant can get an idea of his or her progress.

Patience workbook. The next workbook paralleled the previous two workbooks for participants in the patience (conscientiousness-based) condition. The activities include those similar to the activities in the other workbooks, engaging participants in a variety of patience-promoting exercises, such as those previously mentioned for forgiveness and humility. The patience acrostic is SPACE; Serenity, Patient listening and perspective, Allow boredom, Comfort with delays, Endure with perseverance.

The workbook begins with instructions and self-monitoring assessments intended to focus the participant on his or her experience with patience. These assessments include the Patience Scale (Schnitker & Emmons, 2007), and the Honesty/Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness Personality Inventory – Patience Subscale (HEXACO-PI; Lee & Ashton, 2004). Six sections, roughly ten exercises each, then define patience and engage the participant through steps to promote patience, after which an identical group of assessments is given so that the participant can get an idea of his or her progress.

Self-Control workbook. This workbook paralleled the previous workbooks for participants in the self-control (conscientiousness-based) condition. The activities include those similar to the activities in the other workbooks, engaging participants in a variety of self-control-promoting exercises, such as those previously mentioned for the other conditions. The acrostic

for the self-control workbook is POWER; Pick a time when you were undisciplined, Own your goals, Work out a backup plan, Elevate awareness, Remember to control your environment.

The workbook begins with instructions and self-monitoring assessments intended to focus the participant on his or her experience with self-control. These include the Values In Action Inventory of Strengths – Self-Control Scale (VIA-IS; Park & Seligman, 2004), and the California Psychological Inventory – Self-Control Scale (CPI-SC; Gough & Bradley, 1996). Six sections, roughly ten exercises each, then define self-control and engage the participant through steps to promote self-control, after which an identical group of assessments is given so that the participant can get an idea of his or her progress.

Positivity workbook. This workbook is intended to promote general positivity, not necessarily along the lines of any warmth or conscientiousness-based virtue. The format was consistent with the other workbooks, along with similar exercises to promote positivity. The acrostic for positivity was HAPPY; Have a meaningful outlook, Apply your strengths, Put things in perspective, Paint a positive picture of your future, Yes to others.

The workbook begins with instructions and self-monitoring assessments intended to focus the participant on his or her experience with positivity. These include the Positivity Self-Test (Fredrickson, 2009), and the PANAS (Watson, Clark, & Tellegen, 1988). Six sections, roughly ten exercises each, then define positivity and engage the participant through steps to promote positivity, after which an identical group of assessments is given so that the participant can get an idea of his or her progress.

Procedure

Participants signed up for the study over the course of two semesters using the SONA system. A waiver of documentation of consent was requested due to the purely electronic nature

of the study; completing the surveys and workbook on a computer presented no more than minimal risk of harm and involves no procedures for which written consent is normally required outside the research context. In lieu of traditional consent, the participant was e-mailed information about the content of the study and was given the option to terminate their participation at any time.

Once the participants received this information and chose to proceed with the study, they were e-mailed a pre-test battery of the measures described above.

When they returned the completed battery via e-mail, participants were e-mailed the intervention workbook to which they were randomly assigned. Those randomly assigned to the non-action control condition participants did not receive a workbook and were told they would receive their next set of surveys in four weeks. Workbook condition participants had two weeks to complete and return the workbook, and workbooks were checked for completion upon receipt.

Two weeks after returning the workbook, participants were e-mailed a post-test battery, including all measures described above. Control condition participants were simply e-mailed this battery four weeks after they returned their pre-test measures. Participants were given a week to return the post-test battery; thus, each participant took roughly five weeks to complete the entire study, including non-action control condition participants, who simply completed the batteries with no interventions workbooks.

Results

Preliminary Analyses

Means, standard deviations, alphas, and ranges for all variables are reported in Table 2 for the 168 participants who completed the measures at both time points. The data were first checked for normality, missing data, and outliers. All but one of the variables met the

assumptions of normality with levels of skewness and kurtosis being less than 1.5 in absolute value; Time 2 negativity was leptokurtotic.

Table 2

Means, Standard Deviations, and Alphas for Outcome Measures, N = 168

Condition	TFS M	TFS SD	VIA M	VIA SD	PS M	PS SD	SCS M	SCS SD	Pos M	Pos SD	Neg M	Neg SD
T1 Forgiveness	30.90	7.22	34.73	6.66	34.57	6.58	42.93	9.18	35.00	8.03	21.63	9.11
T2 Forgiveness	34.79 ^A	6.72	35.54	5.40	37.43 ^A	6.41	42.71	9.41	34.25	6.37	19.04	7.17
T1 Humility	32.27	6.11	32.62	5.19	35.35	6.57	39.27	9.82	33.58	5.63	22.85	6.98
T2 Humility	36.23 ^A	7.82	35.19 ^A	5.88	38.27 ^A	5.86	40.38	10.12	33.54	7.09	19.77 ^A	6.35
T1 Patience	32.29	7.18	35.29	6.38	36.39	6.28	41.68	10.19	34.82	7.66	19.61	5.70
T2 Patience	36.43 ^A	5.51	35.14	6.73	39.21 ^A	5.92	44.36 ^A	10.64	34.04	8.36	17.36	6.37
T1 Self-Control	35.67	6.50	34.63	5.78	38.17	6.94	40.63	8.56	35.58	5.40	18.79	5.99
T2-Self-Control	36.38	6.02	35.92	5.63	38.46	7.23	41.75	7.99	35.08	4.74	17.83	4.09
T1 Positivity	35.33	5.45	34.44	6.94	35.96	5.20	40.70	4.98	35.37	4.91	20.93	6.26
T2 Positivity	38.04 ^{AF}	5.56	35.20	6.42	37.56 ^A	5.44	42.20	6.60	35.28	7.04	17.19 ^A	3.99
T1 Control	33.39	5.73	33.42	4.87	36.48	6.67	41.15	8.95	35.00	5.84	19.61	7.68
T2 Control	33.45 ^E	6.11	33.13	5.88	36.47	6.97	40.69	9.34	33.63	5.66	20.13	7.99
T1 Total	33.23	6.52	34.18	5.98	36.11	6.4	41.12	8.74	34.89	6.33	20.57	7.15
T2 Total	35.77	6.41	34.94	5.99	37.84	6.32	42.01	9.11	34.27	6.58	18.61	6.32

Note. Possible values for the TFS (Trait Forgivingness Scale) measure of forgivingness range from 10-50; Possible values for the VIA (Values in Action) measure of humility range from 9-45; Possible values for the PS (Patience Scale) measure of patience range from 10-50; Possible values for the SCS (Self-Control Scale) measure of self-control range from 13-65; Possible values for the Pos (Positive and Negative Affect Schedule) measure of positivity range from 10-50; Possible values for the Neg (Positive and Negative Affect Schedule) measure of negativity range from 10-50

A = significantly different from own condition's Time 1 score

B = significantly different from forgiveness condition's score at the same time

C = significantly different from humility condition's score at the same time

D = significantly different from patience condition's score at the same time

E = significantly different from positivity condition's score at the same time

F = significantly different from control condition's score at the same time

G = significantly different from all conditions' score at the same time

Those participants who completed measures at only Time 1 ($n = 40$) were omitted from the analyses. A one-way multivariate analysis of variance (MANOVA), for those completing versus the omitted participants, was conducted to compare the initial values of the six outcome variables at Time 1. There was no multivariate effect, multivariate $F(6, 201) = 1.13, p < .05$. (Although it is not necessary to check, given the non-significant multivariate F , I computed univariate ANOVAs and none of the 6 measures were significantly different between those who completed the first time point only and those who completed both time points.) Missing values for six participants were estimated by using the mean values for each condition of each particular measure. There were no outliers outside the ranges of expected values and should represent true responses.

A one-way MANOVA for between-condition differences at Time 1 for the outcome measures revealed no significant differences between conditions on any measure at Time 1, multivariate $F(30, 630) = .88, p > .05$. Intercorrelations of all scales are reported in Table 3. I computed 15 correlations, thus, a Bonferroni-corrected alpha of .003 was used to determine statistical significance of correlations. Forgiveness was correlated only with patience; humility was correlated only with self-control; patience was correlated with forgiveness, self-control, positivity, and negativity; self-control was correlated with all virtues except forgiveness as well as positivity and negativity; positivity and negativity were correlated with self-control and also were correlated with each other.

Table 3

Intercorrelations for Outcome Variables at Time 1, N = 168

	TFS	VIA	PS	SCS	Pos	Neg
TFS	--					
VIA	.144	--				
PS	.414*	.213	--			
SCS	.191	.296*	.320*	--		
TPos	.181	.146	.252*	.388*	--	
TNeg	-.185	-.111	-.296*	-.346*	-.367*	--

* $p = .003$ (Bonferroni-corrected).

Note. TFS = Trait Forgivingness Scale; VIA = Values in Action (humility); PS = Patience Scale; SCS = Self-Control Scale; Pos = Positive and Negative Affect Schedule (positivity); Neg = Positive and Negative Affect Schedule (negativity)

Hypothesis 1: Workbook-based interventions aimed at promoting four separate virtues will indeed promote those virtues. (This is essentially a manipulation check to insure that the workbooks produced the desired changes in the relevant dependent variable.)

Analysis. Paired-samples t -tests were conducted on each condition individually at Time 1 and Time 2 as a manipulation check prior to further multivariate analysis.

Results. The forgiveness condition ($n = 30$) demonstrated a significant increase in forgivingness scores, $t(29) = -2.97, p < .01$. Similarly, the humility condition ($n = 26$) demonstrated a significant increase in humility scores, $t(25) = -4.51, p < .001$. The patience condition ($n = 28$) increased significantly in patience scores, $t(27) = -2.37, p < .05$. The self-control condition ($n = 24$) did not improve significantly in self-control scores. The positivity condition ($n = 27$) significantly decreased in negativity, $t(26) = 4.02, p < .001$, but no significant changes occurred in positivity between Time 1 and Time 2. These manipulation checks suggest

that all conditions besides the self-control condition should be considered in tests of multivariate effects.

Hypothesis 2: There will be differential effects on outcome measures over time based on condition, both (a) within and (b) between conditions.

Analysis. Multivariate and univariate effects of the workbook interventions against the control condition were analyzed using a $5 \times 2(S)$ [condition \times time(S)] MANOVA. Planned contrasts were also performed using mixed linear modeling (MLM) in order to examine differences in slopes between the intervention conditions and the control condition.

Results. Overall, there was a significant interaction effect of condition membership and time on the outcome measures, multivariate $F(6, 137) = 2.94, p = .01$. Univariate $5 \times 2(S)$ [Condition \times time(S)] ANOVAs were conducted on each dependent variable to determine the locus of effect. Significant univariate condition \times time(S) Fs were followed by simple main effects analyses comparing the Time 1 with Time 2 score for each condition.

Forgivingness. There was a significant condition by time (S) interaction effect on forgivingness, $F(4, 139) = 2.92, p < .05$. Between-subjects contrasts demonstrated greater improvement in the forgiveness, humility, and patience conditions than in the control condition. Forgivingness values changed significantly over time within the forgiveness condition, $F(1, 139) = 14.37, p < .001$, the humility condition, $F(1, 139) = 12.94, p < .001$, the patience condition, $F(1, 139) = 15.25, p < .001$, and the positivity condition, $F(1, 139) = 6.28, p < .05$. No significant change in forgivingness occurred in the control condition. See Figure 1 for within and between-subjects effects.

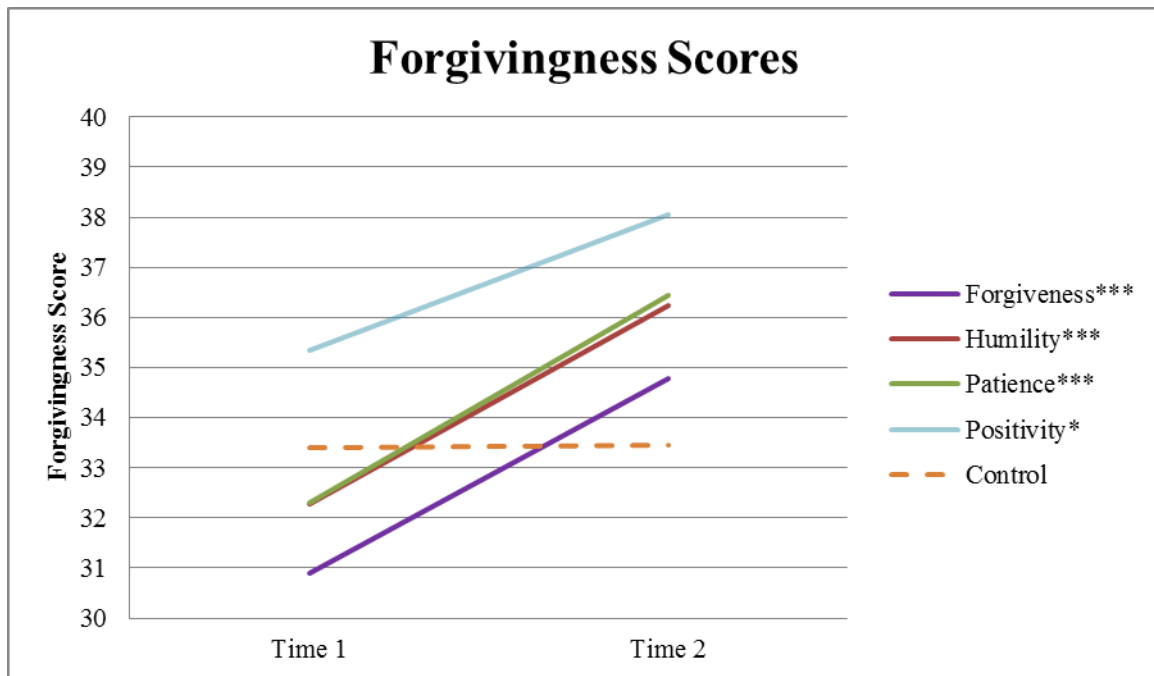


Figure 1. Differences within and across conditions in forgivingness.

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Bold lines indicate conditions which showed significantly more improvement than the dotted lines. Pale lines indicate no between-condition difference. Forgiveness, $t(139) = 2.70$, $p = .01$, humility, $t(139) = 2.65$, $p = .01$, and patience, $t(139) = 2.83$, $p < .01$, conditions improved significantly more than control.

Humility. There was no significant condition x time(S) interaction effect on humility. Improvement in humility scores did not differ significantly across conditions. Humility values changed significantly over time within the humility condition alone, $F(1, 139) = 7.84, p < .01$. No significant change in humility occurred in other conditions or in the control condition (see Figure 2).

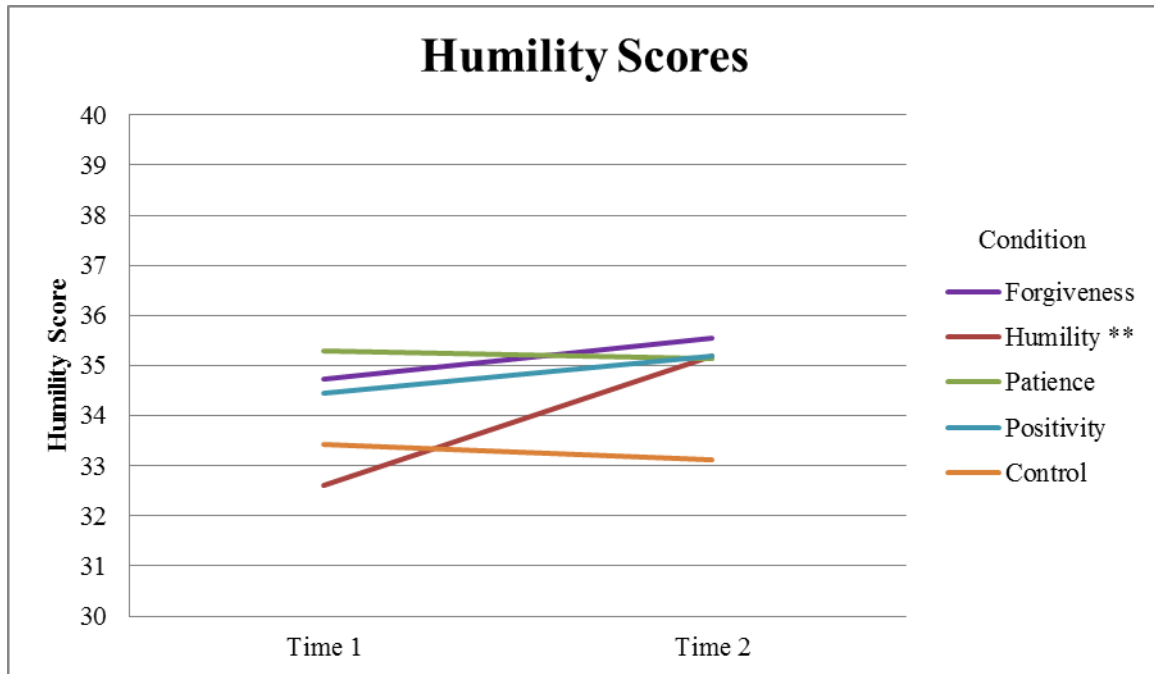


Figure 2. Within-condition differences in humility. Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Patience. There was no significant condition x time(S) interaction effect on patience. Improvement in patience scores did not differ significantly across conditions. Patience values changed significantly over time within the forgiveness condition, $F(1, 139) = 10.14, p < .01$, the humility condition, $F(1, 139) = 9.17, p < .01$, and the patience condition, $F(1, 139) = 9.20, p < .01$. No significant change in patience occurred in the positivity condition or control condition (see Figure 3).

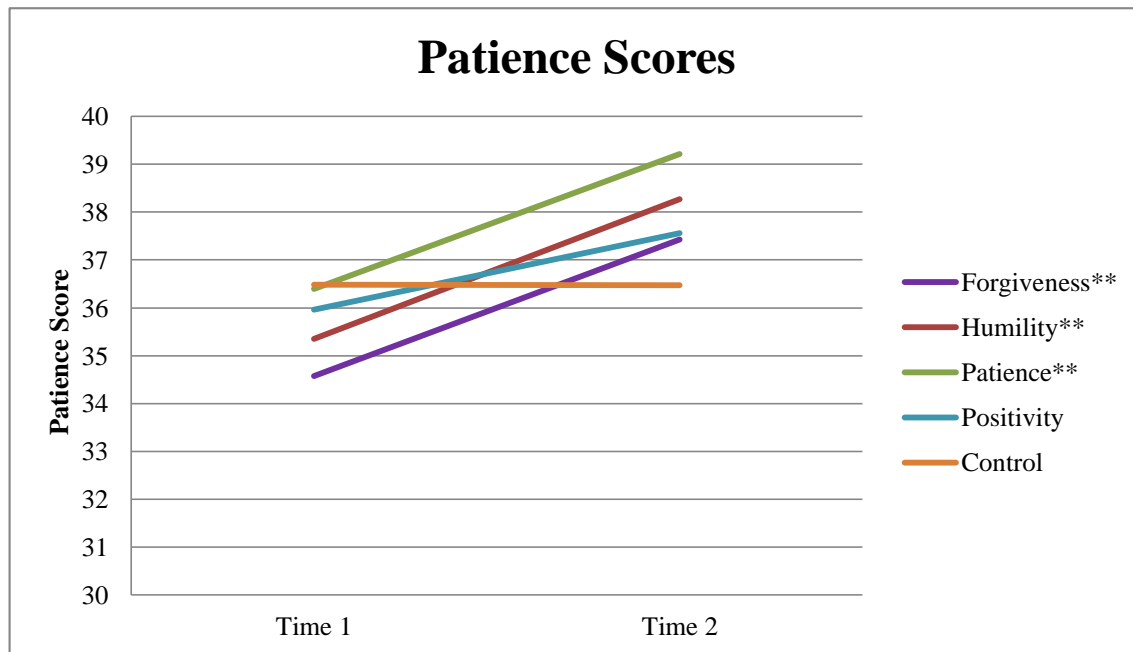


Figure 3. Within-condition differences in patience. Note: $*p < .05$, $**p < .01$, $***p < .001$

Self-Control. There was no significant time by condition interaction effect on self-control. Improvement in self-control scores did not differ significantly across conditions. Self-control values changed significantly over time within the patience condition alone, $F(1, 139) = 5.96, p < .05$. No significant changes occurred in other conditions or in the control condition (see Figure 4).



Figure 4. Within-condition differences in self-control. Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Positivity. There was no significant time by condition interaction effect on positivity. Improvement in positivity scores did not differ significantly across conditions. Positivity values did not change significantly in any conditions over time (see Figure 5).

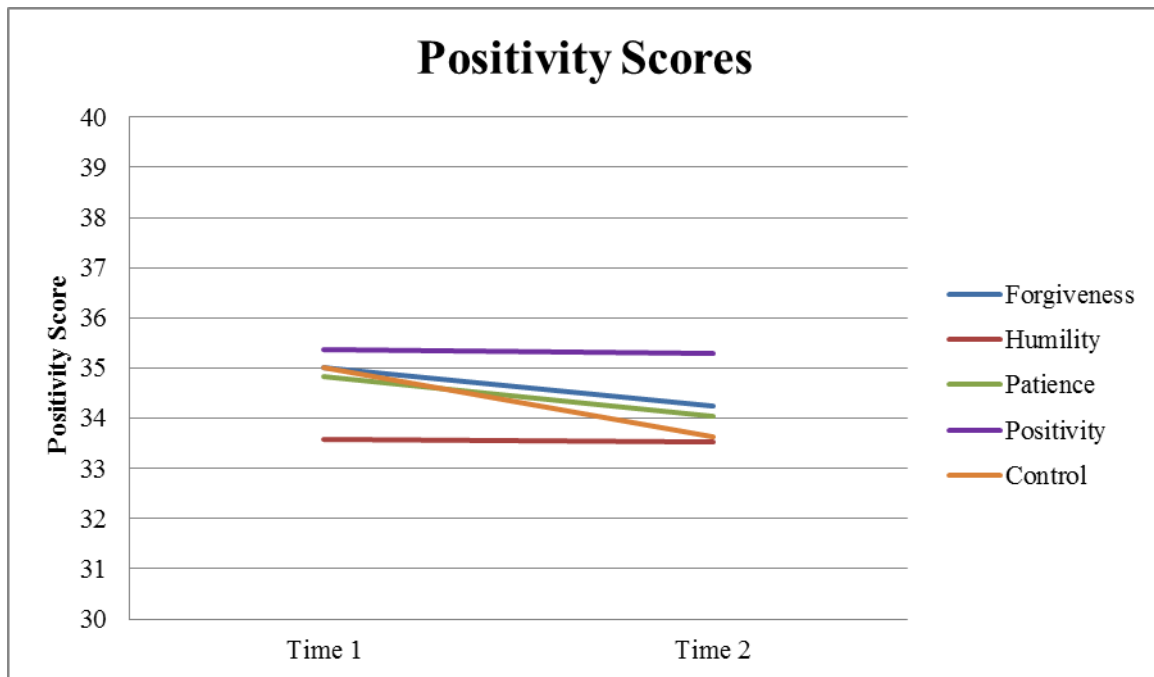


Figure 5. Within-condition differences in positivity. Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Negativity. There was no significant time by condition interaction effect on negativity. Improvement in negativity scores did not differ significantly across conditions. Negativity values changed significantly over time within the forgiveness condition, $F(1, 139) = 4.77, p < .05$, the humility condition, $F(1, 139) = 5.19, p < .05$, and the positivity condition, $F(1, 139) = 8.90, p < .01$. Marginally significant changes occurred in the patience condition, $F(1, 139) = 3.34, p = .07$. No significant change in negativity occurred in the control condition (see Figure 6).

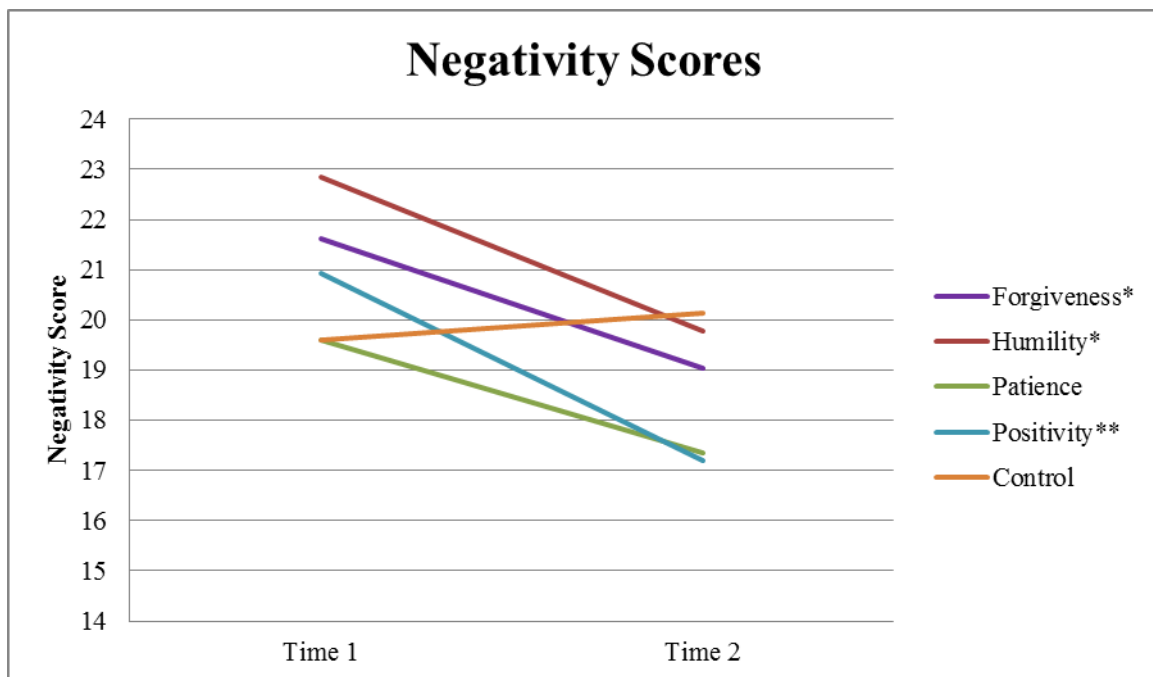


Figure 6. Within-condition differences in negativity. Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Summary of Hypothesis 2 Results. Overall, there was a significant interaction effect of condition and time(S) on the outcome measures. The only significant univariate time by interaction effect was on forgiveness. All intervention conditions improved between time points in forgiveness. Forgiveness, humility, and patience conditions improved in forgiveness more than control condition. Humility scores improved significantly in the humility condition alone, and no condition outperformed any other. The forgiveness, humility, and patience conditions

improved significantly between time points in patience, but no conditions changed significantly more than any other. No conditions improved over time in self-control or positivity, and no conditions changed significantly more than any other. All intervention conditions decreased at least marginally significantly in negativity, but condition did not determine the amount of change that was experienced.

Hypothesis 3: Workbook-based interventions aimed at promoting three separate virtues will promote those virtues significantly more than a general positivity intervention, but both will be better than the control condition.

Analysis. Data for the three virtue intervention condition were collapsed into one virtue intervention condition. Multivariate and univariate effects of this condition against the positivity condition and control condition will be analyzed using MANOVA. Planned contrasts will also be performed using mixed linear modeling (MLM) in order to examine differences in slopes between the collapsed intervention condition, the positivity condition, and the control condition. See Table 4 for means and standard deviations.

Table 4

Means, Standard Deviations, and Alphas for Outcome Measures for the Three Virtue Conditions Compared to the Positivity Condition and to the Control Condition, N = 144

Condition	TFS M	TFS SD	VIA M	VIA SD	PS M	PS SD	SCS M	SCS SD	Pos M	Pos SD	Neg M	Neg SD
T1 Virtues	31.79	6.83	34.26	6.18	35.42	6.45	41.38	9.73	34.50	7.18	21.33	7.48
T3 Virtues	35.78 ^A	6.68	35.30 ^A	5.95	38.28 ^A	6.06	42.54	10.06	33.96	7.22	18.70 ^A	6.66
T1 Positivity	35.33	5.45	34.44	6.94	35.96	5.20	40.70	4.98	35.37	4.91	20.93	6.26
T3 Positivity	38.04 ^{AF}	5.56	35.20	6.42	37.56 ^A	5.44	42.20	6.60	35.28	7.04	17.19 ^A	3.99
T1 Control	33.39	5.73	33.42	4.87	36.48	6.67	41.15	8.95	35.00	5.84	19.61	7.68
T3 Control	33.45 ^E	6.11	33.13	5.88	36.47	6.97	40.69	9.34	33.63	5.66	20.13	7.99
T1 Total	33.23	6.52	34.18	5.98	36.11	6.4	41.12	8.74	34.89	6.33	20.57	7.15
T3 Total	35.77	6.41	34.94	5.99	37.84	6.32	42.01	9.11	34.27	6.58	18.61	6.32

Note. Possible values for the TFS (Trait Forgivingness Scale) measure of forgivingness range from 10-50; Possible values for the VIA (Values in Action) measure of humility range from 9-45; Possible values for the PS (Patience Scale) measure of patience range from 10-50; Possible values for the SCS (Self-Control Scale) measure of self-control range from 13-65; Possible values for the Pos (Positive and Negative Affect Schedule) measure of positivity range from 10-50; Possible values for the Neg (Positive and Negative Affect Schedule) measure of negativity range from 10-50

A = significantly different from own condition's Time 1 score

B = significantly different from forgiveness condition's score at the same time

C = significantly different from humility condition's score at the same time

D = significantly different from patience condition's score at the same time

E = significantly different from positivity condition's score at the same time

F = significantly different from control condition's score at the same time

G = significantly different from all conditions' score at the same time

Results. Overall, there was a significant 3 x 2(S) interaction effect of condition (Three Virtues, Positivity, Control) x time(S) on the outcome measures, multivariate $F(6, 137) = 2.89, p = .01$. Univariate 3 x 2(S) [Condition x time(S)] ANOVAs were conducted on each dependent variable to determine the locus of effect. Significant univariate condition x time(S) Fs were followed by simple main effects analyses comparing the Time 1 with Time 2 score for each condition.

Forgivingness. There was a significant condition x time(S) interaction effect on forgivingness, $F(2, 141) = 5.91, p < .01$. The forgivingness improvement in the virtues condition slope was significantly different from the control condition, $t(141) = 3.44, p < .001$. Forgivingness values changed significantly over time within the virtues condition, $F(1, 141) = 43.13, p < .001$, and the positivity condition, $F(1, 141) = 6.36, p = .01$. No significant change in forgivingness occurred in the control condition (see Figure 7).

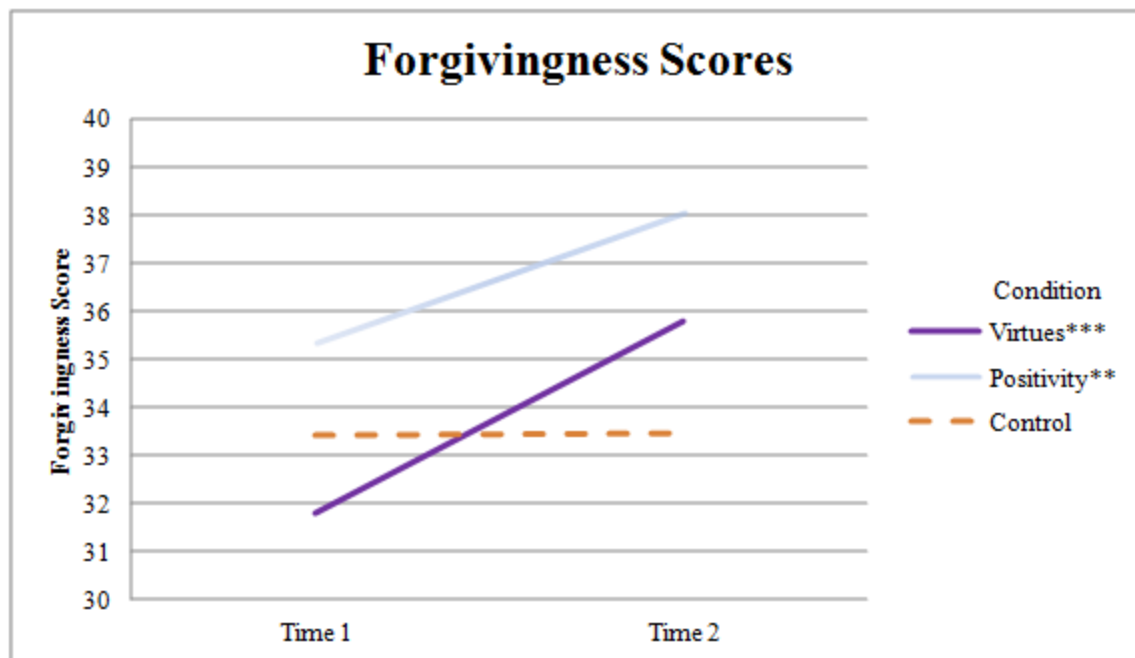


Figure 7. Differences within and across conditions in forgivingness. Note: * $p < .05$, ** $p < .01$, *** $p < .001$. The virtues condition slope was significantly different from the control condition slope $t(141) = 3.44, p < .001$.

Humility. There was no significant time by condition interaction effect on humility.

Conditions did not differ from one another on their improvement in humility. Humility values changed significantly over time within the virtues condition alone, $F(1, 141) = 4.02, p = .05$. No significant change in humility occurred in the positivity condition or the control condition (see Figure 8).

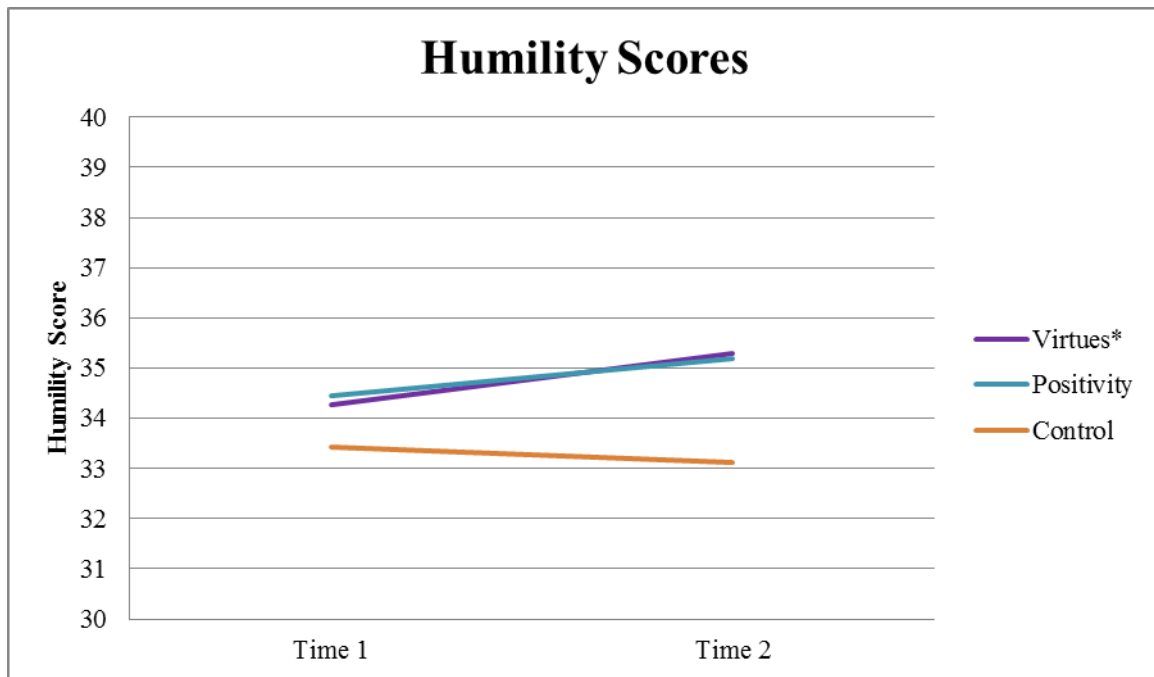


Figure 8. Within-condition differences in humility. Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Patience. There was a significant time by condition interaction effect on patience, $F(2, 141) = 4.22, p < .05$. The virtues condition improved significantly more than the control condition, $t(141) = 2.87, p < .01$. Patience values changed significantly over time within the virtues condition alone, $F(1, 141) = 28.90, p < .001$. No significant change in patience occurred in the positivity condition or control condition (see Figure 9).

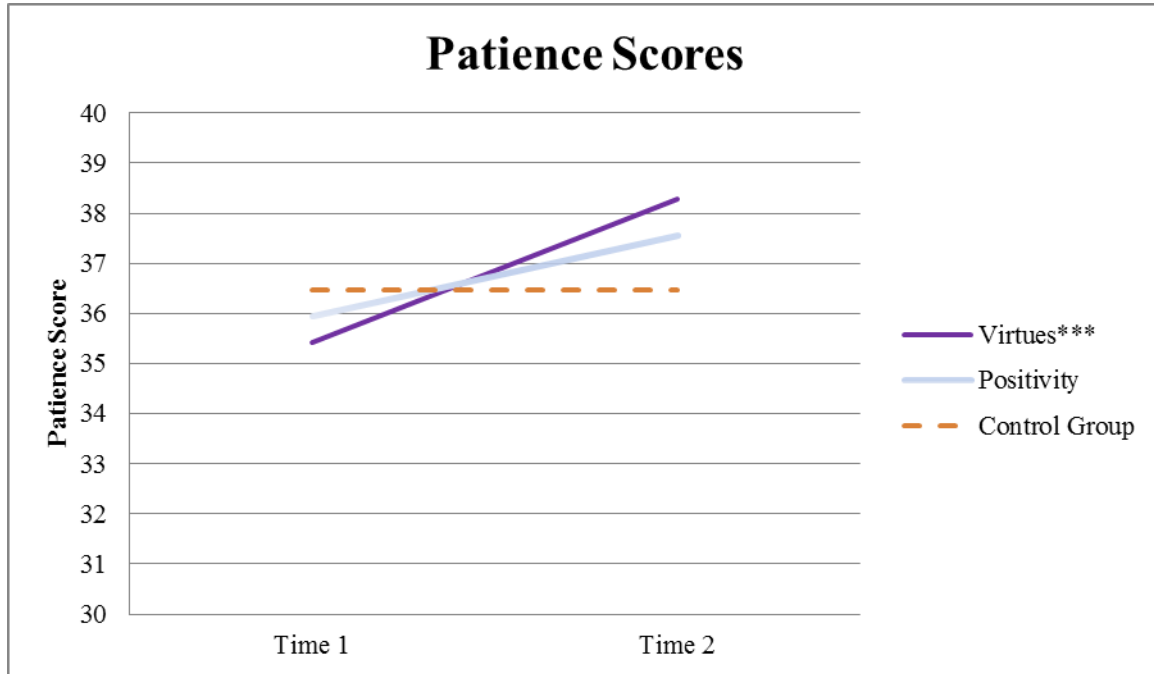


Figure 9. Differences within and across conditions in patience. Note: $*p < .05$, $**p < .01$, $***p < .001$. The virtues condition slope was significantly different from the control condition slope $t(141) = 2.87, p < .01$.

Self-Control. There was no significant time by condition interaction effect on self-control. None of the three conditions differed significantly from one another in improvements in self-control. Self-control values changed marginally in the virtues condition alone, $F(1, 141) = 3.31, p < .08$. No significant change in self-control occurred in the positivity condition or control condition (see Figure 10).



Figure 10. Within-condition differences in self-control. Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Positivity. There was no significant time by condition interaction effect on positivity. Improvement in positivity did not differ significantly across any condition. Positivity values did not change significantly in any conditions over time (see Figure 11).

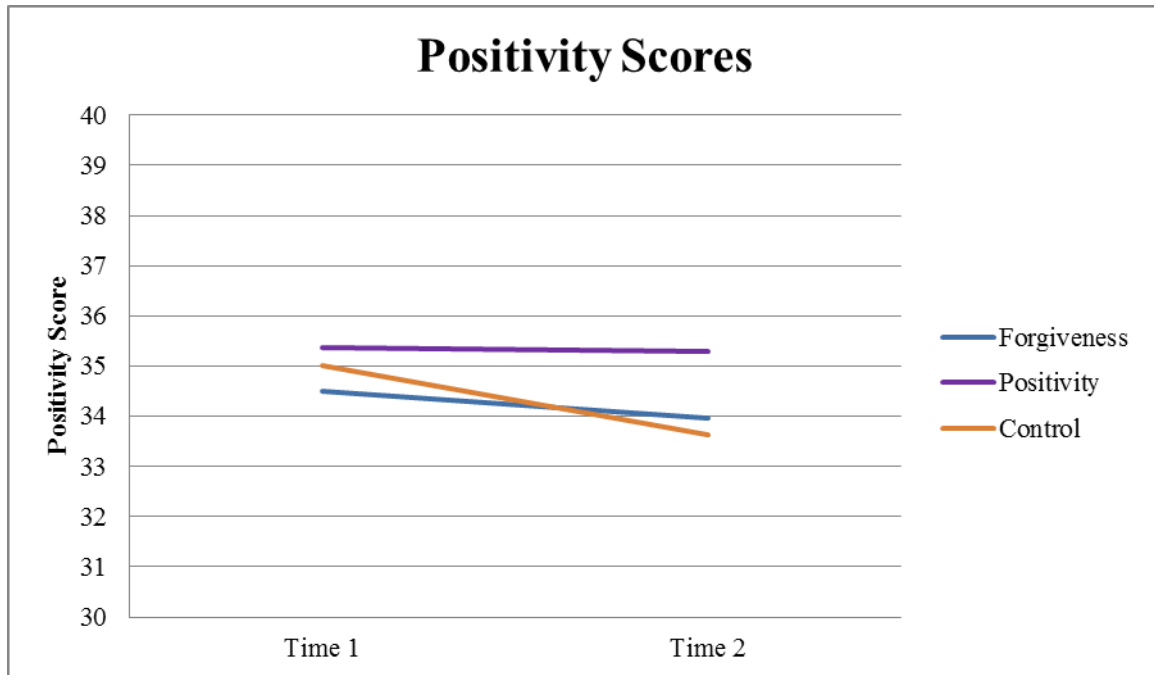


Figure 11. Within-condition differences in positivity. Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Negativity. There was a significant time by condition interaction effect on negativity, $F(2, 141) = 3.85, p < .05$. Both the virtue, $t(141) = -2.37, p < .02$, and the positivity conditions, $t(141) = -2.54, p = .01$, slopes were different from the control condition. Negativity values changed significantly over time within the virtues condition, $F(1, 141) = 13.88, p < .001$, and the positivity condition, $F(1, 141) = 9.01, p < .01$. No significant change in negativity occurred in the control condition (see Figure 12).

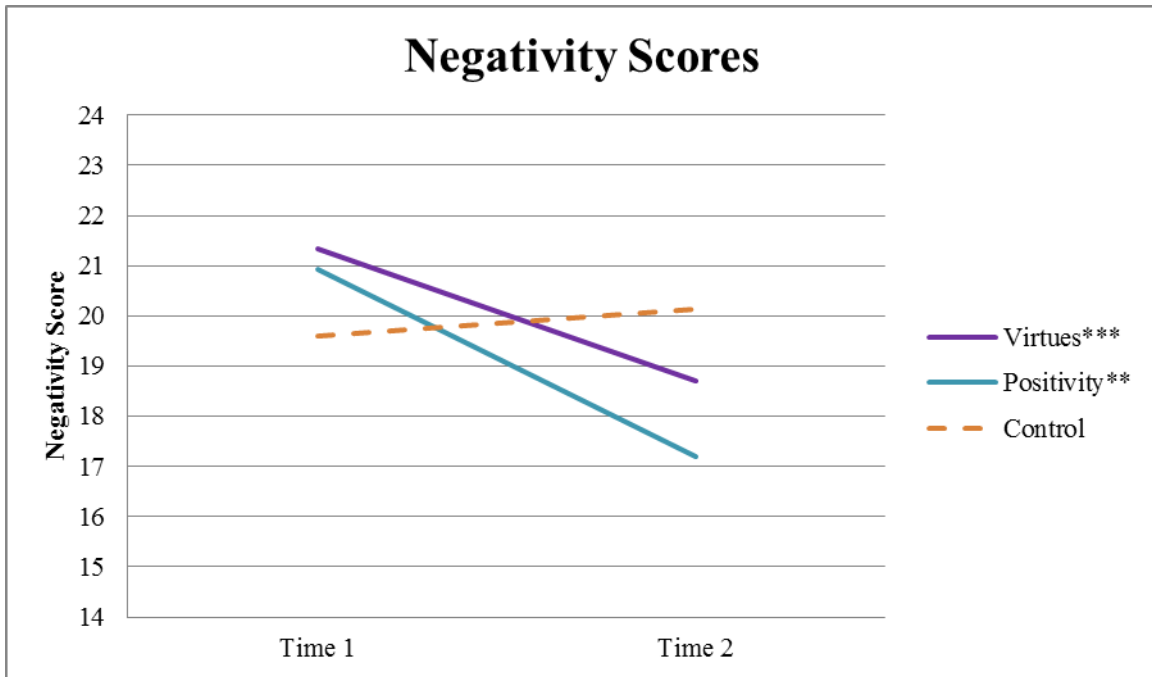


Figure 12. Differences within and across conditions in negativity. *Note:* * $p < .05$, ** $p < .01$, *** $p < .001$. Both the virtue, $t(141) = -2.37, p < .02$, and positivity condition, $t(141) = -2.54, p = .01$, slopes were different from the control condition slope

Summary of Hypothesis 3 Results. Overall, there was a significant interaction effect of condition membership and time on the outcome measures. Univariate interactions of condition and time occurred in forgivingness, patience, and negativity. Both the virtues and positivity conditions improved significantly in forgivingness, with the virtues condition improving significantly more than the control condition. The virtues condition also improved significantly

in humility, but no conditions improved more in humility than the others. In patience, the virtues condition again improved significantly between time points, which was significantly more than the control condition. The virtues condition saw marginally significant improvement in self-control, but no condition did better than any other in self-control. No changes occurred within or between conditions in positivity. Both the virtues and positivity conditions improved significantly reduced negativity between time points, and both improved significantly more than the control condition.

Discussion

Hypothesis 1

Hypothesis 1 stated that workbook-based interventions aimed at promoting four separate virtues would indeed promote those virtues. This was consistent with the results, as each of workbook, with the exception of self-control, resulted in improvements in its target virtue. The positivity intervention workbook was also successful in reducing negativity. Thus, all conditions except for self-control were included in further analyses, but self-control as an outcome was still measured for the other conditions.

Based on these findings, suggestions from previous intervention research in forgiveness, humility, patience, and positivity were appropriate for use in workbook interventions. The body of self-control literature is so large that more refining is needed to determine what best works in a general intervention, as opposed to targeting a particular self-controlling behavior (e.g. smoking cessation, dieting).

Hypothesis 2

Hypothesis 2 stated that there would be differential effects on outcome measures over time based on condition. The results supported this hypothesis also. When conditions were

compared to one another, tests revealed that the forgiveness, humility, and patience conditions all improved significantly more in forgivingness than did the control condition. Additionally, each virtue intervention condition produced other changes in addition to improvements in its target virtue (see Table 5). The positivity intervention condition also produced changes in some virtues in addition to decreasing negativity.

Table 5

Improvement in Outcome Variables by Condition – Hypothesis 2

Condition	Significant Improvements in Outcome Variables
Forgiveness Condition	Forgivingness; patience
Humility Condition	Forgivingness; humility; patience; negativity
Patience Condition	Forgivingness; patience; self-control
Positivity Condition	Forgivingness; negativity
Control Condition	No improvements

These data suggest that increasing one virtue may aid in increasing some, but not all, others. Thus, either the workbooks have generic common factors that promote virtue, or the virtues are somewhat inter-related (or both). The correlation table (Table 3) supports this.

Per Worthington and Berry's (2005) discussion of warmth and conscientiousness-based virtues as described in the Introduction section, it would stand to reason that warmth-based virtues may not correlate highly with conscientiousness-based virtues and vice versa. However, Table 3 demonstrates that strong correlations occurred across warmth and conscientiousness-based virtue categories, not just within them. Further, each virtue workbook resulted in improvements in both warmth-based and conscientiousness-based virtues. Thus, the current

study is consistent with Berry and Worthington (2005) insofar as virtues are not strictly bound by their classification, but cross-categorical virtue promotion is more possible than previously conceptualized. These data suggest the generalizability of virtues and the many undiscovered perks to becoming more virtuous in one or more domains.

Hypothesis 3

Hypothesis 3 stated that workbook-based interventions aimed at promoting four separate virtues would promote those virtues significantly more than a general positivity intervention condition. This was mostly consistent with the results. To have been perfectly consistent, one would expect to see (1) the virtues condition outperform the positivity condition on each outcome variable and (2) no virtue improvement in the positivity condition that was greater than the control condition. Results suggest neither to be the case.

When the three virtues conditions were combined into a single condition, this virtues condition was never significantly different than the positivity condition. However, there were times when the virtues condition was significantly better than the control condition when the positivity condition was not. For example, the collapsed virtues condition significantly outperformed the control condition in forgivingness and patience when the positivity condition did not. Even though both the virtues condition and the positivity condition improved more in negativity than the control condition, negativity is not a virtue.

There was no time when the positivity condition alone improved, suggesting that the positivity workbook produced no improvement that was not also produced by the virtue workbooks, which also produced greater improvement in virtues. Both the virtues condition and the positivity condition showed more improvement than the control condition overall, but the virtues condition improved virtue measures in addition to simply decreasing negativity (see

Table 6). In this way, the current study was consistent with Hypothesis 3; increases in the target virtues did not seem to be better accounted for by increases in positivity (or decreases in negativity).

Table 6

Improvement in Outcome Variables by Condition – Hypothesis 3

Condition	Improvements in Outcome Variables
Combined-Three-Virtues Condition	Forgivingness; humility; patience; negativity
Positivity Condition	Forgivingness; negativity
Control Condition	No improvements

What does this tell us about virtue and positivity? The promotion of both is helpful and certainly better than nothing when it comes to building virtues. However, virtue interventions are the stronger option for promoting virtues than is a positivity intervention. These data suggest that even though the positivity condition did improve over time in forgivingness, no improvements in humility, patience, or self-control were realized. On the other hand, combining the three virtue conditions (i.e., workbooks in forgiveness, humility, and patience), participants not only reduced negativity equally to the positivity workbook condition, but (in addition to forgivingness) participants realized gains in humility and patience (and near-significant gains in self-control). This suggests that the changes in the outcome variables reflecting virtues were attributable to virtue promotion and positivity rather than simply looking at life more positively alone.

Fredrickson's (2001) broaden and build theory implicates that positivity has the potential to facilitate virtue. Findings from the current study are consistent with this theory, since those in

the positivity condition did improve in forgivingness in addition to decreased negativity. Still, these results also demonstrate Seligman's theory of authentic happiness in that the virtue conditions demonstrated greater potential to produce a virtue relevant change *in addition to* a decrease in negativity than the positivity condition. Collapsing virtue conditions and testing them against the positivity condition suggested that the best explanation for the relationship between positivity and virtue is that it is mostly unidirectional; that is, virtue can lead to positivity, but positively seldom leads to virtue.

Why would the positivity condition yield improvements in forgivingness if positivity seldom leads to virtue? As told in the review of the literature, reduction of negative emotions is a key component to the forgiveness process, which extends so far as to contribute to better health outcomes (Green, DeCourville, & Sadava, 2012; Harris & Thoresen, 2003). This reduction in negativity is implicated in forgiveness far more than any of the other selected virtues in this study. Thus, the positivity condition's improvement in forgivingness (that was still not over and above that of the forgiveness or other virtue conditions), is consistent with previous research.

The prevalence of negativity in society is part of what brought the current study to being (CDC, 2011). Yet none of the workbooks, not even the positivity workbook, made people more positive. However, both the virtue conditions as a whole as well as the positivity condition made people less negative than those in the control condition. Fredrickson (2009) describes the utility of decreasing negativity in the process of becoming more positive, and the current study supports the decrease of negative affect as part of the process of becoming more virtuous. This is a promising first step in changing the social climate.

Limitations

The first limitation of this study is the use of a convenience sample of undergraduate students. However, as illustrated in the Participants section, the sample grew to be very diverse, both culturally and developmentally. Many upper-level psychology students, in addition to introductory psychology students from across disciplines, participated in this study, representing multiple age groups and backgrounds. What began as a limitation can now be viewed as a strength when compared to other convenience sample studies, such as those found in the forgiveness and health literature review (see Table 1).

Due to the design of this study and the use of workbooks over an extended period of time, there is no guarantee that the participants were engaged or participating fully in each workbook activity. However, workbooks have demonstrated their ability to facilitate engagement and personal improvement in many other areas of psychological research and practice (e.g., Craske & Barlow, 2005; Gilson et al., 2009). To minimize potential treatment infidelity, the workbooks were designed to make certain that the participant actually had to watch the videos, read the quotes, etc., in order to complete the workbook. Further, the workbooks were checked for completion upon receipt; that the workbook is completed in the end is proof of at least minimal engagement. Each workbook is currently being analyzed for markers of engagement to be explored in a follow-up study.

It is important to remember that none of these workbooks had been tested previously, because they were created for this study. Even the forgiveness workbook, which is based on an evidence-based (and empirically validated) intervention for forgiveness, had never been tested in workbook form prior to the outset of the present study. In order to minimize adverse effects this may have on this study, each workbook was sent to a respective expert in the field as a validity

check. Experts made comments, questions, and suggestions for the interventions, strengthening their effectiveness. Workbooks were also pilot tested on thirty undergraduate students, and their comments, questions, and suggestions were considered for the interventions. Further, prior to the completion of the present study, the forgiveness workbook also received a limited test within an undergraduate thesis (Harper, 2012; Worthington, Toussaint, Lavelock, Griffin, Greer, Lin, Wade, & Hoyt, 2013).

A potential concern for the study is that workbook effects may have been limited by formatting constraints. Ideally, the idiosyncrasies of each virtue would shine through in order to have the best chance of finding differences, but the workbooks also needed to be comparable in format for their maiden voyage into testing. Thus, the variety of exercises was consistent across workbooks, which may have minimized the effects the workbooks could have otherwise had if created individually. Fortunately, the experts in the field helped to make each workbook unique and relevant to its virtue while maintaining a format consistent with the others.

A common limitation to studies in psychology is the tendency toward self-reports for assessing outcome variables. Given the limited research available on assessment of virtues, in addition to the nature and design of this study, performing behavioral and other-report measures are not a realistic option. Thus, this limitation was minimized by relying on self-report measures with strong psychometric support, and many of them have been widely accepted as the authority in measurement for their construct.

Finally, a threat to any within-subjects design is the history and maturation of the participants. In terms of history, for example, it may be harder to forgive a murder than a more minor transgression. Concerning maturation, something may have happened to participants during the course of the study, particularly if they happened to be completing the workbook

during stressful periods such as midterms. Both of these threats were minimized by random assignment to conditions, and data collection took place over the course of two semesters, such that the percentage of academic stressful times coinciding with the current study were minimal.

Future Directions

First and foremost, these workbooks must be beta-tested. As engagement of participants in these activities is evaluated and their feedback is considered, aspects of the workbooks that were most helpful and necessary can be identified. Many participants commented about the large time investment for completing the workbooks, which needs to be reconciled with the necessity for spending time in order to make trait changes. Different formatting and methods of use, such as online modules, physical copies of the workbooks, or even apps, may assist with breaking up the interventions into more manageable pieces. Another method that may assist in this is by allowing participants to self-select into workbook conditions, suggesting intrinsic motivation and therefore a willingness to spend time completing such an intervention.

Each workbook requires editing. However, substantially more refining needs to be done for the self-control intervention. As new versions of the workbooks are tested, plans for their dissemination for community and program use should be implemented.

Results from the current study indicate that the promotion of humility translated into improvements in many other virtues, yet no other intervention produced humility as a byproduct. Thus, it is humility more than any of the other virtues under examination in this study which served as a “master virtue.” Future research should continue to explore humility and its promotion and exercise its efficiency in producing multiple virtue improvements.

While other virtues serve as valuable outcome measures, future studies should expand their consideration of outcome variables, truly reflecting the effects of the workbooks. Outcome

variables to consider in future workbook studies that are supported by the review of forgiveness literature include physical health (e.g., blood pressure, cardiovascular activity, cortisol secretion, self-reported health) and mental health (e.g. depression, anxiety). Further outcomes to include are life satisfaction, relationship satisfaction, job satisfaction, meaning in life, subjective well-being, and many more. More attention should be given to the relationship between goodness and happiness and how they affect such outcome variables.

Conclusions

Overall, forgiveness, humility, patience, and positivity workbooks did what they were intended to do. They actually did more than they were intended to do, and the data support the notion that it is better to be good than to be happy because good often encompasses happy, but happy does not always include good. Results from the current study indicate that both are better than nothing.

So what does the current study contribute to the field? For one, this is the first study of workbook interventions for virtues. This is also the first study to test patience and humility interventions at all, let alone in workbook form. These and the other workbooks, with the exception of self-control, have demonstrated their potential to promote virtuous behavior and provide hope for alleviating the increasing negativity and stress of our society.

The current findings will add to the new, but growing research of virtues in psychology. Exploring virtue interventions informs the constructs for future investigation. But perhaps most importantly, this preliminary exercise in virtue-promoting workbooks allows us to explore the best circumstances for their success in a more generalized setting, breathing new insight into the way psychologists approach intervention.

This study continues to support the philosophy behind positive psychology, as we move toward a psychology that incorporates flourishing and enhancement of values and strengths to become a better, happier, and more purposeful society.

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List of References

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Appendix A – Summary Table for Forgiveness and Health Literature Review

Table 1

Summary Table for Forgiveness and Health Literature Review

Year	Authors	Title	Journal	Research Question	Participants	Method	Measures and Interventions Used	Conclusion	Future Direction
1. in press	Quenstedt-Moe & Popkes	Forgiveness and Health in Christian Women	Journal of Religion and Health	What is the relationship between forgiveness, anger, depression, and health in Christian women?	96 Christian women from a large Midwestern area, aged 40-74 (mean age 52). Mostly Caucasian, at least high school educated, and married. All had experienced a transgression to potentially forgive	Correlational; cross-sectional	*Enright Forgiveness Inventory *Spielberger State-Trait Anger Expression Inventory *Beck Depression Inventory-II * Short Form-36 Health Survey (SF-36)	Forgiveness was negatively related to depression and anger and positively related to physical and mental health. Women were more likely to forgive if they were represented as equal to men in their Church doctrine.	Checklists as opposed to open-ended questions may be helpful in more accurately assessing health. More research is needed on how religious values and church doctrines influence the health of their parishioners.
2. 2013	Toussaint, Owen, & Cheadle	Forgive to Live: Forgiveness, Health, and Longevity	Journal of Behavioral Medicine	Is forgiveness A predictor of mortality? What are some potential psychosocial, spiritual, and health mechanisms of the effects of forgiveness on longevity?	1,232 adults over age 66 from a nationally representative sample of United States (59% female), mean age = 75 years. Limited to Christian and non-religious participants.	Correlational; longitudinal	*A forgiveness measure comprised of seven subscales (created for this study) *A religiousness/spirituality measure assessing 8 types of religiousness/spirituality *9 scales of mental and physical health and well-being *2 scales of depression *4 scales of life satisfaction, self-esteem, optimism, and perception of control *2 single item	God's unconditional forgiveness and conditional forgiveness of others initially significantly predicted mortality risk. After controlling for religious, socio-demographic, and health behavior variables, only conditional forgiveness of others significantly predicted mortality. Physical health mediated the relationship between forgiveness of others and mortality. Thus, conditional forgiveness of others is associated with mortality risk, which is mediated by	Future studies should include more specific types of mortality (e.g. cardiovascular issues) aside from general mortality. Forgiveness mediators should continue to be examined with mortality across multiple time points in order to imply causation. Future research should explore these factors across more diverse age ranges, multicultural groups, and religious backgrounds using stronger measures.

							measures of current smoking and drinking *1 single item measure global physical health	physical health.	
3. 2012	Hernandez, Vonderfecht, Smith, Cress, Davis, & Bigger	Development and Evaluation of a Faith-Based Psychoeducational Approach to Forgiveness for Christians	Journal of Religion & Spirituality in Social Work: Social Thought	Can a psychoeducation program aimed to enhance Christian adults' forgiveness capability actually work?	81 Christian adults aged 18-80, 69% female. Mostly Seventh-Day Adventists.	Quasi-experimental; longitudinal	*Three 8-hour psychoeducation forgiveness interventions *Enright Forgiveness Inventory (EFI) *State-Trait Anger Inventory (STAI) *Five items about their presenting transgression *A ten-point scale of emotional discomfort about their transgression on an analog pain scale *Interviews	Participants significantly improved in their ability to forgive, decreasing anger and pain. The impact most commonly reported by the participants of the intervention was the realization that forgiveness is not reconciliation. Participants reported fewer behavioral responses to the offense.	Should be replicated in a more diverse population. The impact of unforgiveness on family and social support should be examined more closely, particularly in the clinical realm.
4. 2012	Cox, Bennett, Tripp, & Aquino	An Empirical Test of Forgiveness Motives' Effects on Employees' Health and Well-Being	Journal of Occupational Health Psychology	What motivates employees to forgive or reconcile with coworkers who have offended them?	Study 1: 249 employed adults in the U.S (53% female), mean age = 38.46. Mostly Caucasian. Study 2: 425 employed adults in the U.S. (52% male), mean age = 25.77. Mostly Caucasian.	Study 1: Correlational; cross-sectional Study 2: Correlational; cross sectional	*Motives Scale (created in this study) *Perceived stress questionnaire *Cohen-Hoberman Inventory of Physical Symptoms (CHIPS)	Study 1: There are five types of motives for forgiveness: apology, moral, religious, relationship, and lack of alternatives. Study 2: Individuals who reported forgiveness due to a lack of alternatives, or who forgave for religious reasons, were more likely to report greater stress and poorer health. Those who forgave because it was the moral thing to do experienced positive outcomes, including less stress than those with no alternative or because a higher power demanded it. There was no relationship between forgiving for relationship/apology reasons with either stress or general health.	Longitudinal data are needed; should be replicated with a better measure of perceived stress. The process of forgiveness (i.e. decisional, emotional) should be examined in each of these motivational domains. Workplace interventions should be researched in light of these findings.
5.	Green,	Positive	Journal of	Do	623 freshmen	Correlational;	45 minute survey	The relationship between	Consider emotional vs.

2012	DeCouville, & Sadava	Affect, Negative Affect, Stress, and Social Support as Mediators of the Forgiveness-Health Relationship	Social Psychology	positive/negative affect, perceived stress, and social support mediate the relationship between forgiveness and mental/physical health?	at a mid-sized, Canadian, public university. 38% Catholic, 37% Protestant, 5% other, 19% not religious. 99% single.	cross-sectional	including --*Tendency to Forgive Scale (TTF) *2 face-valid items to measure stress *Social Support Questionnaire (SSQ) *Positive and Negative Affect Schedule (PANAS) *Short Form-36 Health Survey (SF-36)	forgiveness and health was mediated by affect (positive and negative), stress, and the interrelatedness between negative affect and stress. There was limited support for mediating effects of social support and the interrelationship between positive affect and social support. The results suggest that the relationship between forgiveness and health may be mediated rather than direct	decisional forgiveness when testing these moderators; include age as a potential moderator; assess for pragmatic vs. emotional social support; longitudinal studies needed for direction of causality; need to add physiological measures; consider personality traits
6. 2012	Li, Shi, Li, & Yang	Forgiveness Interventions and its Clinical Application Status	Chinese Journal of Clinical Psychology	What is the status of forgiveness interventions in clinical work?		Review		Existing forgiveness interventions tend to focus on the Christian/Western conceptualization of forgiveness. They have also been used successfully in marriage and family therapy, but the process itself and what actually happens during these interventions needs to be examined.	Need for studies of forgiveness interventions for extramarital affairs and other marriage and family issues. How can forgiveness interventions be adapted to the Chinese culture and belief system? Need more case studies for greater understanding of how interventions work in the counseling process.
7. 2012	Svalina & Webb	Forgiveness and Health Among People in Outpatient Physical Therapy	Disability and Rehabilitation	How is forgiveness related to health among people who need rehabilitation? Is forgiveness beneficial in reference to health and healthy behaviors? Is self-forgiveness the hardest to achieve and the most important for	141 adults from southern Appalachia, 100% Caucasian, 100% at least high-school education. 62% female, 70% married, 72% religious, average age = 53. All currently sought treatment for at least one injury.	Correlational; cross-sectional	*Forgiveness-Short Form portion of the Brief Multidimensional Measure of Religiousness/Spirituality Medical Outcomes Study *Medical Outcomes Study Short Form-12 (SF-12) *Religious Background and Behaviors Questionnaire	Forgiveness of self is difficult to achieve, but has direct effect on mental health and an indirect effect on overall physical health. Whether feeling forgiven (by God) is also important for health depends on religious culture.	Longitudinal studies are needed to determine direction and causality; include more geographical and religious cultures and examine the differences therein; addition of physiological measures; include more than just single-item measures; consider the impact of forgiveness on various and specific injuries

				health?					
8. 201 2	Hirsch, Webb, & Jeglic	Forgiveness as a Moderator of the Association Between Anger Expression and Suicidal Behaviour	Mental Health, Religion, and Culture	Do forgiveness of self, forgiveness of others, and feeling forgiven by others moderate the relationship between anger expression and suicidal behavior?	372 ethnically diverse undergraduates at a Northeastern U.S. university, average age 19.	Correlational; cross-sectional	*Brief Multidimensional Measure of Religiousness/Spirituality *3 single items assessing forgiveness of self, of others, and by God *Beck Depression Inventory (BDI-II) *Multidimensional Anger Inventory (MAI) *Suicidal Behaviours Questionnaire – Revised (SBQ)	Forgiveness of self proved to be to be a moderator in the relationship between suicidal behavior and both inward and outward expression of anger. Thus, self-forgiveness, which is the most difficult forgiveness to attain, may be a helpful tool in treating/reducing anger and suicidal behavior, the ultimate physical health risk.	In future studies, a measure of anger with better psychometric properties should be used. More facets of forgiveness, such as situational forgiveness, should be included in future studies. More characteristics at the individual level should be assessed in what will hopefully be longitudinal studies.
9. 201 2	Moorhead, Gill, Minton, & Myers	Forgive and forget? Forgiveness, personality, and wellness among counselors in training.	Counseling and Values	What are the effects of forgiveness on counseling students' overall (physical and mental) wellness, and what is the role of personality?	115 counseling students from 5 universities, 86.5% female, aged 20-69 years (mean age 30.99). Mostly Caucasian and heterosexual, unsure as to whether this sample is representative of counseling programs	Correlational; cross-sectional	*Transgression Narrative Test of Forgiveness (TNTF) *Transgression-Related Interpersonal Motivations (TRIM) *Interpersonal Personality Item Pool (IPIP) *5F-Wel	After controlling for personality factors, forgiveness is shown to have a significant effect on overall wellness for counseling students. Unforgiveness and revenge were negatively correlated with wellness. Personality factors such as neuroticism, openness, and agreeableness are related to wellness.	What is the role of revenge in the relationship between wellness and the social self? Need to replicate with a more diverse sample. Does avoiding the stress of going through forgiveness preserve wellness for the short-term? What is the impact of forgiveness-based interventions on wellness?
10. 201 1	Tabak & McCullough	Perceived Transgression or Agreeableness Decreases Cortisol Response and Increases Forgiveness Following	Biological Psychology	What is the relationship between victims' agreeableness and neuroticism? What is the relationship between victims' perceptions of	39 undergraduate females at the University of Miami	Correlational; longitudinal	*Big Five Inventory (BFI) *2 single items on perceived closeness to the transgressor *Inclusion of Other in the Self Scale (IOS) *Single item on perceived painfulness of transgression *Transgression-Related Interpersonal	Greater perceived agreeableness in the transgressor is associated with less cortisol for the victim and higher rates of forgiveness. Victims' levels of neuroticism and agreeableness had a negligible association with cortisol and forgiveness. After an interpersonal conflict, perceptions	Need for experimental methods; include men in sample to examine differences in the cortisol/social interaction relationship; physiological measures should include more time points of measurements; examine commitment to the transgressor as a potential mediator

		Recent Interpersonal Transgression		their transgressors and plasma cortisol and forgiveness over time?			Motivations (TRIM) *11 items on depression and somatic symptoms *Solid phase Radioimmunoassay *Intervention: speech reactivity task	of transgressors' agreeableness may impact extent to which they should be viewed as continuing threats to their victims.	
11. 2011	Roh	The Impact of Religion, Spirituality, and Social Support on Depression and Life Satisfaction Among Korean Immigrant Older Adults	Dissertation Abstracts International	How do religious experience, spiritual practice, and social support relate to depression and life satisfaction among older Korean immigrants?	200 Korean Immigrant Older Adults (KIOA) in Queens, NY, ages 65 to 89 years. 57% males, 66% married, 22% widowed, 76% live with family, 43% college educated, range of 1-45 years lived in the U.S.	Correlational; cross-sectional	*Brief Multidimensional Measure of Religiousness/Spirituality *Lubben Social Network Scale-Revised *Geriatric Depression Scale *Satisfaction with Life Scale	Perceived social support may decrease depression and increase life satisfaction among KIOA. The relationship between low religious/spiritual coping skills (including forgiveness) and higher depression suggests that KIOA should be helped to develop these skills in therapy.	Need for longitudinal research to examine the relationship between religion/spirituality (specifically related coping skills) and well-being among older Korean immigrants and other minority groups, need for probability sampling for greater generalizability, need for culturally validated measures, need greater knowledge of psychosocial problems for immigrants
12. 2011	Lawler-Row, Hyatt-Edwards, Wuensch, & Karremans	Forgiveness and Health: The Role of Attachment	Personal Relationships	What is attachment's association with forgiveness and health?	114 introductory psychology students (51 males, 63 females), mean age 20.4 years, 83% Caucasian	Correlational; cross-sectional	*Acts of Forgiveness Scale *Forgiving Personality Inventory *Inventory of Parent and Peer Attachment *A relationship commitment scale developed by Arriaga and Agnew (2001) *A parental intrusion scale developed by Barber (1996) *UCLA Loneliness Scale *Perceived Stress Questionnaire *Cohen-Hoberman Inventory of Physical Symptoms *Physiological measures of blood pressure and heart rate	This study concludes with a strong negative correlation between forgiveness and health problems (stress, loneliness, physical symptoms of illness, and negative physiological responses). Attachment seems to be related to health problems via forgiveness. This may be due to unforgiveness in relationships causing psychological tension, which leads to health problems. While forgiveness undoubtedly has an indirect influence on health, it is unlikely that it is via attachment style or relationship commitment.	Need a more generalizable sample. Attachment issues that began in childhood with the parents should be examined in terms of their role in the relationship between forgiveness and health. Need to control for other health factors, like smoking, drinking, etc. Social factors like alienation and time spent working should also be explored. Longitudinal studies should examine whether changes in forgiveness result in changes in health.
13. 2011	Mistler	Forgiveness,	Dissertation Abstracts	What is the association	309 adults, aged 18-76	*Correlational ; cross-	*Heartland Forgiveness Scale	Significant relationships were found between	Forgiveness and self-compassion should be

1		Perfectionism, and the Role of Self-Compassion	International	between forgiveness and perfectionism? Does self-compassion mediate that relationship?	(mean 40.58). 237 were women, 71 were men, 78% were Caucasian. Most had doctoral degrees, and most lived in urban and suburban areas. Recruited using online resources.	sectional	(HFS) *Almost Perfect Scale – Revised (APS-R) *Self-Compassion Scale (SCS) *Satisfaction with Life Scale (SWLS)	forgiveness and perfectionism as well as forgiveness and self-compassion. Self-compassion proved to be a partial mediator in the relationship between forgiveness and perfectionism, suggesting that higher forgiveness leads to higher self-compassion, which then leads to fewer maladaptive tendencies associated with perfectionism. These tendencies, particularly emphasis on the discrepancy between reality and perfection, have been shown to have a negative influence on well-being.	examined as therapeutic interventions for clients suffering from the adverse effects of perfectionism. More research is needed on how to increase self-compassion. A closer examination of these variables with respect to age differences is warranted, as well as differences in adaptive vs. maladaptive perfectionist tendencies. Need to replicate with a more generalizable sample.
14. 2010	Turesky & Schultz	Spirituality Among Older Adults: An Exploration of the Developmental Context, Impact on Mental and Physical Health, and Integration into Counseling	Journal of Religion, Spirituality, and Aging	What is the developmental context of spirituality for older adults? What is its impact on health? How can it be integrated into interventions for older adults?		Review		With the decline of physical health, increased reflection on the past, and increased salience of death, spirituality plays a very important role in older adults. Forgiveness is related, as it has notable health benefits, can make us feel better about the past, and can make us feel ready and at peace with death. Several models of forgiveness illustrate this shift from the material to the internal world as time goes by, thus spiritual interventions such as gerotranscendence, forgiveness, guided imagery, and mindfulness meditation have been known to be helpful in older adults.	Integrate spiritual techniques into counseling and interventions, need more research on religion and spirituality in older adults.
15. 2010	Webb & Brewer	Forgiveness, Health, and Problematic	Journal of Health Psychology	Are there relationships between multiple	721 college students from two and four year colleges	Correlational; cross-sectional	* Brief Multidimensional Measure of Religiousness/Spiritua	Forgiveness of self is the most difficult kind of forgiveness to achieve, but also the most important for	Should be tested in a population of older, legitimate alcoholics. Subscale data should be

		c Drinking Among College Students in Southern Appalachia		dimensions of forgiveness and health-related variables among college student problematic drinkers?	in southern Appalachia, 126 of whom identified as problematic drinkers. Mostly single Caucasian females, average age 22, most participants religious or spiritual.		lity (forgiveness portion) *Alcohol Use Disorders Identification Test (AUDIT) *Medical Outcomes Study Short Form-12 *Physical Health Questionnaire *Health-Promoting Lifestyle Profile II *Perception of Social Support *Inventory of Interpersonal Problems *Religious Background and Behaviors *Single-item Belief scale to assess for current belief in God	health. Because of this, problematic drinkers may have trouble pursuing health. Health, behavior, social support, and interpersonal functioning all had strong relationships with forgiveness. These relationships depend on the multiple dimensions of forgiveness, and therefore the statement “forgiveness is related to health” is too simple to be accurate.	examined within the established relationships. Longitudinal data is needed to determine direction and causality.
16. 2010	Kalayjian, Moore, Abersohn, & Kim	Exploring Long-Term Impact of Mass Trauma on Physical Health, Coping, and Meaning-Making: Exploration of the Ottoman-Turkish Genocide of the Armenians	Mass Trauma and Emotional Healing Around the World: Rituals and Practices for Resilience and Meaning Making	How did survivors of Armenian genocide cope? What is their level of PTSD? What is their physical symptomology? What meaning do they associate with the trauma?	16 Armenian Americans living in New York who witnessed the Ottoman-Turkish Genocide of the Armenians. Mean age 85.3 years, 59% female, 50% had higher education but most had no more than primary school, all had been married. 43% immigrated before 1952, 56% arrived after 1966. All were	Correlational; cross-sectional	*Mini Mental State Exam *Brief Symptom Inventory (BSI) *Life Purpose Questionnaire	Higher BSI tends to accompany higher PTSD, suggesting that trauma may lead to greater physical symptomology. No statistical relationship was found among BSI, LPQ, and PTSD. Some PTSD symptoms persisted, but otherwise the survivors who found positive meaning developed good coping skills, and their PTSD and physical symptomology was lower.	Conduct similar research with current genocides, focusing on healing, coping, and spiritual and religious rehabilitation. Interventions should be conducted on perpetrators as well as a measure to prevent genocide.

					either Apostolic or Catholic.				
17. 201 0	Lawler -Row	Forgiveness as a Mediator of the Religiosity – Health Relationship	Psychology of Religion and Spirituality	Does forgiveness mediate the relationship between religiosity and health?	Study 1: 605 adults (aged 50-92 years, median age 61.5), 258 men, 347 women, mostly Caucasian. The majority had at least a high school education and were married and cohabiting. Study 2: 253 adults (aged 52-87, median age 63.2). Mostly Caucasian, married, and Christian. Study 3: 80 adults, aged 27-60 (mean age 42.2 years), 19 men, 61 women	*Correlational ; cross- sectional	Study 1: *Brief Multidimensional Measure of Religiousness/Spiritua lity *Religious Commitment Inventory (RCI) *Satisfaction with Life Scale *Cohen-Hoberman Inventory of Physical Symptoms *Scales of Psychological Well- Being *Beck Depression Inventory Study 2: *Forgiving Personality Inventory (FP) *20 items assessing physical and psychological illness developed by Bartone, et. al. (1989) *Religious Orientation Scale; Intrinsic/Extrinsic – Revised Scale *Ryff Scale of Psychological Well- Being *Acts of Forgiveness Scale *Transgression- Related Interpersonal Motivations Inventory (TRIM) *Spiritual Well-Being Scale *Stanford Spiritual Experiences Scale *Profile of Mood States *RestQ	Trait and state forgiveness both played full and partial mediating roles in the relationship between several aspects of religiosity (i.e. church attendance, prayer, belief, etc.) and physical health (successful aging, physical illness symptoms, quality of sleep, etc.). In conclusion, involvement in religious activities has predictive value for physical and psychological health, often via trait and state forgiveness. Trait forgiveness showed a greater correlation to more traditionally religious concepts, and state forgiveness to more spiritual and physical health concepts.	More research is needed on feeling forgiven by God. What is it like for a religious person to fail to experience forgiveness? Does religion still maintain its benefits in that situation? Can the mediating effects of forgiveness explained socially?

18. 2010	Webb, Toussaint, Kalpakjian, & Tate	Forgiveness and Health-Related Outcomes Among People With Spinal Cord Injury	Disability and Rehabilitation	Will forgiveness have a positive relationship with health-related outcomes in people with spinal cord injury?	140 adults (aged 19-82 years) from the upper Midwest with spinal cord injuries	Correlational; cross-sectional	*Individual items developed by Gorsuch and Hao (1993) *Subscales of the Behavior Assessment System (1992) *Single item of overall physical health status *Satisfaction with Life Scale (SWLS) *Spinal Cord Injury Lifestyle Scale (SCILS)	Forgiveness of self showed a significant association with health outcomes and satisfaction with life. Forgiveness of others was also significantly associated with health outcomes, specifically health status. This suggests that forgiveness at large is related to better health outcomes, but the specific outcomes may depend on the type of forgiveness, self or other.	Need longitudinal studies of this nature, including measures with better psychometric support in addition to physiological measures. Other potential mediators and moderators of the relationship between forgiveness and health should be explored.
19. 2009	Johnstone & Yoon	Relationships Between the Brief Multidimensional Measure of Religiousness/Spirituality and Health Outcomes for a Heterogeneous Rehabilitation Population	Rehabilitation Psychology	What is the relationship between the Brief Multidimensional Measure of Religiousness/Spirituality and physical and mental health for those with chronic disabilities?	118 outpatient individuals. 61 had traumatic brain injury, 32 had cerebral vascular accidents, and 25 had spinal cord injuries.	Correlational; cross-sectional	*Brief Multidimensional Measure of Religiousness/Spirituality (BMMRS)	For individuals with chronic disabilities, better physical health is related to positive spiritual experiences and willingness to forgive. Negative spiritual experiences are related to worse physical and mental health.	The BMMRS should be used with a 6-factor model that evaluates positive/negative spiritual experiences, forgiveness, religious practices, and positive/negative congregational support. Interventions should focus on positive spiritual beliefs like forgiveness and reduce negative spiritual beliefs for individuals with chronic disabilities.
20. 2009	Friedberg, Suchday, & Srinivas	Relationship Between Forgiveness and Psychological and Physiological Indices in Cardiac Patients	International Journal of Behavioral Medicine	What is the relationship between forgiveness and psychological and physiological indices in an unhealthy population – individuals with coronary artery disease?	85 inpatient individuals with angina pectoris, coronary artery disease, or myocardial infarction. 56 males, 29 females, age range from 35-81. Sample was closely representative in race.	Correlational; cross-sectional	*Forgiveness of Others Scale *Hospital Anxiety and Depression Scale *Perceived Stress Scale *Total cholesterol *LDL cholesterol *HDL cholesterol *Triglycerides	High forgiveness was associated with lower anxiety, depression, perceived stress, and total cholesterol. Forgiveness remains correlated to mental and physical health in cardiac patients. Forgiveness reduces risk of future cardiovascular events. Psychological indices were not shown to mediate this relationship, suggesting that forgiveness may directly reduce cholesterol.	Forgiveness interventions should be researched for benefits on this population. Longitudinal studies are necessary for determining any causal role. Physiological data should be collected at same time as psychological data. A trait forgiveness scale with a higher Cronbach's alpha should be used in the future.

21. 2009	Ingersoll-Dayton, Campbell, & Ha	Enhancing Forgiveness: A Group Intervention for the Elderly	Journal of Gerontological Social Work	Is Enright's therapeutic model of forgiveness applicable to social work interventions with older adults?	19 elderly individuals, aged 57-82 years, who were emotionally hurt, had something to forgive, and were not psychologically vulnerable. All Caucasian, mostly women, mostly Christian.	Quasi-experimental; longitudinal	*Self-Perceived Health (4 items) *Social Support (6 items) *Anxiety (6 items) *Depression (15 items) *Enright Forgiveness Inventory User's Manual *Single item measuring progress of forgiveness *General forgiveness measure (15 items)	Enright's therapeutic model of forgiveness appears to be effective in social interventions with older adults. Participants showed long-term improvement in forgiveness and depression, short term improvement in physical health. No significant change was detected in anxiety or social support.	Need to include a control group , more racial diversity, and a greater number of settings for conducting the groups .
22. 2009	Turner	Impact of PATTS Group Intervention on Forgiveness in Children	Dissertation Abstracts International	What is the effect of the PATTS anger management intervention on children's ability to forgive themselves and others?	81 kindergarten through fifth grade students in the Hampton Roads area of Virginia. 75% male, 73% African American.	Quasi-experimental; longitudinal	*Child Forgiveness Inventory – Modified (CFI-M)	The forgiveness-enriched group showed lower severity of offense for self and other and higher propensity to forgive the self and other than the no forgiveness group. There was no significant difference between groups for punishment of self or other offense. This implies that forgiveness can stop or prevent bullying from adversely impacting physical health.	What is the efficacy of student vs. leader-led interventions? A shorter measure than the CFI-M should be used with children, and it should include pictures of culturally diverse children. Further modifications of the CFI-M should be considered. Need for examination of factors that contribute to childhood aggression. Future studies should include random assignment.
23. 2009	Browne	Forgiveness Therapy: A Qualitative Study of the Forgiveness Experience of People Who Have Undergone Forgiveness as a Counseling Intervention	Dissertation Abstracts International	What is the experience of people who have experienced forgiveness through a counseling intervention?	11 Caucasian individuals over age 40 (10 women, 1 man) living in an urban Midwestern community	Qualitative; cross-sectional	*Semi-structured 45-90 minute interviews conducted by the researcher *Written documents (journals, letters, etc.) the participants produced regarding the experience *Nonverbal and behavioral observations	According to the participants, the forgiveness process is a struggle, sometimes involving adverse health effects, but often reducing health ailments in the end. Unforgiveness, forgiveness, stress, coping, and physical health all appear to be related. The promise of this relationship was motivating for some participants to forgive. Connections between unforgiveness and physical	The forgiveness process should continue to be examined. Generalizability should be a priority in similar studies in the future. The link between unforgiveness, forgiveness, stress, coping, and physical health should be further explored. The relationship between forgiveness and other variables like intelligence should be explored. Future studies should examine the amount of time necessary

		n						ailments, as well as positive physical responses to the forgiveness experience were common. Physical activity was also expressed as a helpful coping mechanism.	to forgive serious transgressions and select the appropriate age range for such an examination. Interventions should be designed for the distress that accompanies the inability to forgive.
24. 2009	Ng, Chan, Leung, Chan, & Yau	Beyond Survivorship: Achieving a Harmonious Dynamic Equilibrium Using a Chinese Medicine Framework in Health and Mental Health	Social Work in Mental Health	What is the Eastern mind-body-spirit approach, and what kind of interventions are involved?		Presentation of a theory		The holistic body-mind-spirit model assumes a connectedness and harmony among physical, emotional, cognitive, social, and spiritual influences. Certain interventions can target these individually when they are out of balance and adversely affect the others. These include Tai Chi and Qigong exercises, mindfulness, meditation, etc. These interventions should restore harmony by acknowledging disharmony, strengthening the system, harmonizing body and mind, and having a spiritual transformation.	This approach should be considered in future studies.
25. 2009	Couch & Sandfoss	An Analysis of BIS/BAS Connections to Reactions After Romantic Betrayal	Individual Differences Research	How are BIS/BAS related to physical and psychological outcomes following romantic betrayal?	175 college students (96 women, 79 men), mean age 20.7 years, mostly Caucasians from rural areas. All had experienced romantic betrayal in the last month to 20 years, most commonly infidelity.	Correlational; cross-sectional	<ul style="list-style-type: none"> *BIS/BAS Scales *Betrayal Narrative *Trauma Symptoms Checklist (TSC-40) *Impact of Events Scale – Revised *Mental and Physical Health Symptoms Checklist (MPHSC) *Betrayal Embarrassment Scale *Acts of Forgiveness Scale *Unfinished Business Resolution Scale 	High personality-based inhibition was associated with more negative psychological and physical consequences after betrayal than low inhibition. Personality-based approach was not related to positive or negative betrayal reactions, and inhibition and approach did not appear to interact. Therefore, those with inhibition tendencies may be more at risk of developing post-betrayal symptomology.	Do these results apply to other relationship phenomena besides betrayal? Are forgiveness and resolution related more to lacking inhibition than confrontation? Future studies should include more diverse samples.
26. 2009	Ysseldyk, Matheson, &	Forgiveness and the Appraisal-Coping	Stress	What is the relationship among forgiveness,	Study 1: 85 female undergraduates, mean age	Correlational; cross-sectional	<ul style="list-style-type: none"> Study 1: *Revised Conflict Tactics Scale (CTS-2) *3 items appraising 	Women experiencing relationship abuse had lower levels of forgiveness and higher levels of	Need a more generalizable sample in the future, particularly in terms of age, as well as a longitudinal

	Anisman	Process in Response to Relationship Conflicts: Implications for Depressive Symptoms		appraisal-coping, and depressive symptoms in the context of stress related to intimate relationships?	19.8, mostly Caucasian, who were experiencing physical or emotional abuse in their relationships Study 2: 99 undergraduates (35 male, 64 female), mean age 19.82, mostly Caucasian, in a heterosexual dating relationship without abuse, or recently broken up.		relationship stressors *Survey of Coping Profile Endorsement (SCOPE) *State Forgiveness Scale (SFS) *Beck Depression Inventory Study 2: *Stress Appraisal Measure *SCOPE *SFS *BDI	depression. The relationship between higher forgiveness and lower depression was partially mediated by lower threat appraisals and secondary appraisals and lower endorsement of emotion-focused coping. This relationship was also found for men and women in nonabusive relationships and recent breakups. Thus, level of forgiveness guides appraisals of conflict and reliance on emotion-focused coping to influence level of depressive symptoms.	design. Other means of coping, including unhealthy strategies such as drugs and alcohol, should be explored in this relationship. More research on the impact of stress and coping on the forgiveness and physical health relationship is needed.
27. 2009	Louder-Gerber	A Group Forgiveness Intervention for Adult Male Homeless Individuals: Effects on Forgiveness, Rumination, and Social Connectedness	Dissertation Abstracts International	Will a group forgiveness intervention be effective for adult homeless males?	33 adult homeless males (aged 25-65) recruited from a shelter in Texas, mostly Caucasian with at least a high school education	Experimental; longitudinal	*Enright's Forgiveness Intervention (4 2-hour group sessions over 10 days) *Intrusion Subscale of Impact of Event Scale *Forgiveness Scale *Forgiveness Likelihood Scale *Social-Connectedness Scale-Revised *Social Provisions Scale *Tendency to Forgive	The intervention group experienced greater offense-specific forgiveness as well as greater likelihood of future forgiveness than the control group. Participants in the intervention group saw a decrease in rumination and an increase in offense-specific forgiveness, social connectedness, and likelihood to forgive in the future when compared with pretest. There may be a relationship among taking control of a situation, forgiveness, anger, depression, loneliness, self-pity, and physical health outcomes.	Study should be replicated with more participants and for a more extended period of time. Standardized measures should be tested on a homeless population to establish greater validation. Self-forgiveness should be a focus in future studies.
28. 2009	Stammel & Knaevelsrud	Vergbung und Psychische Gesundheit Nach	Trauma and Gewalt	What is the relationship between mental health and		Review		There seems to be a positive connection between forgiveness/willingness to reconcile and mental health	Need better measures and definitions for forgiveness, as well as longitudinal studies to examine if reconciliation with

		Traumatisches Erleben: Ein Überblick		forgiveness of/reconciliation with perpetrators of crimes against humanity?				in the context of war and torture.	perpetrators is beneficial to the mental healing process or if mentally more healthy victims are more likely to be willing to forgive. Knowledge of the direction of this relationship will be invaluable for intervention research. Samples cannot be convenience samples in this research, but rather actual people who have experienced these crimes.
29. 2009	Hart	Creative Nonfiction: Narrative and Revelation	Journal of Religion and Health	What is the therapeutic process behind writing a life narrative?		Review		Life narratives which explore past struggles and their impact can result in reconciliation and forgiveness. This may be due to the honest expression within the narrative.	More research on life narratives as therapeutic is needed.
30. 2008	Rafman	Restoration of a Moral Universe: Children's Perspectives on Forgiveness and Justice	Women's Reflections on the Complexities of Forgiveness (Edited Book)	What is the moral component of forgiveness? Should it be considered a remedy for moral breaches as well as relational? What is its relationship to justice?		Presentation of a model of forgiveness		Justice and forgiveness should be intertwining concepts, and forgiveness has implications for psychological health following trauma. Because this is a moral universe, forgiveness should include a moral component in its theoretical conceptualization. Very real cultural, political, social, and moral issues have a profound intra/interpersonal impact on children, and we should acknowledge these issues and help them to overcome trauma with forgiveness in order to perpetuate morality.	How does forgiveness develop? What contexts and situations are important? How does forgiveness relate to grief and trauma? More research on the morality and developmental considerations (attachment, etc.) of forgiveness is needed, as well as forgiveness in children.
31. 2008	Allen, Phillips, Roff, Cavanaugh, & Day	Religiousness/Spirituality and Mental Health Among Older Male	The Gerontologist	What is the relationship between religiousness/spirituality, age, race, type of crime, and	81 male inmates over age 50 at a correctional facility in Alabama, mostly	Correlational; cross-sectional	*Brief Multidimensional Measure of Religiousness and Spirituality *Brief Symptom Inventory – Third	More years of incarceration was related to a lower amount of forgiveness the inmates experienced. Better physical health was associated with lower depression and anxiety.	Longitudinal studies are needed to examine whether spiritual experiences contribute to greater forgiveness. Future research should examine how belief in vs.

		Inmates		physical and mental health in older male inmates?	Caucasian who had committed murder or sexual assault		Edition *Hastened Death Scale - Modified	Better emotional health (less depression and less desire for hastened death) was related to a greater number of spiritual experiences and not feeling forsaken by God. Increased spiritual experiences may decrease feelings of abandonment by God and lead to better mental health.	abandonment by God may mediate the relationship between spiritual experiences and mental health.
32. 2008	Belicki, Rourke, & McCarthy	Potential Dangers of Empathy and Related Conundrums	Women's Reflections on the Complexities of Forgiveness (Edited Book)	Is forgiveness always beneficial?		Presentation of a model of forgiveness		Empathy can result in less reflexive distress, greater social skills, increased forgiveness, and reduced vengeance. However, this may neglect justice via accepting and understanding excuses and lead to increased victimization. Excuses may prove to be less hurtful than apologies. While forgiveness has many known benefits, it is not without risks.	Are more those with more distressed tendencies more likely to avoid their enemies, but also more likely to forgive when avoidance is not an option?
33. 2008	Wilson, Milosevic, Carroll, Hart, & Hibbard	Physical Health Status in Relation to Self-Forgiveness and Other-Forgiveness in Healthy College Students	Journal of Health Psychology	What is the relationship between self-forgiveness, other-forgiveness, and health?	266 physically healthy undergraduates (81% female) from a Canadian university, mean age 22.19	Correlational; cross-sectional	*Heartland Forgiveness Scale (HFS) *Medical Outcomes Study Short-Form (MOS SF-20)	While both types of forgiveness are positively correlated with better physical health, self-forgiveness seems to have a greater positive influence on physical health than other-forgiveness – which suggests that self-forgiveness may mediate the relationship between other-forgiveness and physical health.	Needs to be replicated longitudinally and using physiological measures. Does negative affect influence the relationship between health and self-forgiveness? Can self-forgiveness interventions reduce guilt and shame and lead to better health? Different operationalizations of self and other forgiveness should be tested.
34. 2008	Bono, McCullough, & Root	Forgiveness, Feeling Connected to Others, and Well-Being: Two Longitudinal Studies	Personality and Social Psychology Bulletin	What is the relationship between well-being and forgiveness?	Study 1: 115 undergraduates (91% female) at Southern Methodist University. Mean age	Study 1: Correlational; longitudinal Study 2: Correlational; longitudinal	*Transgression-Related Interpersonal Motivations Inventory (TRIM) *Single item assessing how painful they perceived the transgression to be *Satisfaction With	Higher forgiveness was associated with higher well-being in terms of life satisfaction, mood, and physical symptoms. This relationship was even stronger when there was greater closeness with the person before the	Experimental studies are the next step. More longitudinal research on relationships, well-being, and forgiveness is needed. Does this relationship have implications for physical health? Further, research on both the victim and the

					was 19.76 years, all had experienced an interpersonal transgression in the preceding 7 days Study 2: 165 undergraduates (112 female) at the University of Miami, all had experienced an interpersonal transgression in the preceding 7 days		Life Scale (SWLS) *Positive and Negative Affect Schedule (PANAS) *A combination of items assessing physical symptoms, taken from Bartone et.al, (1989) and Emmons (1992) *3 items assessing how close they were to their transgressor *2 items assessing transgressor's apology/ amends	transgression and the transgressor apologized and made amends. Higher well-being was also related with higher forgiveness, suggesting that the relationship may be somewhat cyclical.	transgressor involving apologies/conciliatory behaviors which make forgiveness more likely is needed.
35. 2008	Elsheikh	Factors Affecting Long-Term Abstinence from Substances Use	International Journal of Mental Health and Addiction	What attitudes are helpful in drug abstinence for attaining long-term abstinence?	62 randomly selected participants at Al-Amal Hospital (mean age 37.9) who had been abstinent for three months with no other health conditions. Mostly former heroine addicts.	Correlational; cross-sectional	*39-item survey assessing attitudes about various treatments	Prayer was a popular behavior for developing coping skills for resisting substance use during residential and behavior modification treatment. These coping skills included problem solving, feelings expression, forgiveness, refusal and avoidance, and positive thinking, and they were positively correlated with length of abstinence.. Social support was reported as improved during treatment and development of these skills. Participants reported improvements in both mental and physical health as well as quality of life during treatment.	Future studies should include more participants. Length of abstinence and type of substance use should be controlled in future studies.
36. 2008	Avery	The Relationship Between	Dissertation Abstracts International	What is the relationship between	95 participants (66 female)	Correlational; cross-sectional	*Heartland Forgiveness Scale (HFS)	Self-forgiveness is positively correlated with better mental and physical	Gender differences should be explored when it comes to the absence of a

		Self-Forgiveness and Health: Mediating Variables and Implications for Well-Being	1	forgiveness of self, forgiveness of others, mental and physical health, empathy, and religiosity?	University of Hartford undergraduates in the introductory psychology class (mean age 20), mostly Christian and Caucasian		*Rand 36-Item Short Form Health Survey (SF-36) *Santa Clara Strength of Religious Faith Questionnaire (SCSRF) *Balanced Emotional Empathy Scale (BEES)	health. Self and other forgiveness were moderately correlated with one another. Forgiveness of others was positively correlated with mental health but not physical health. Empathy showed no relation to either kind of forgiveness or to religiosity, and religiosity was related to other-forgiveness, but not self-forgiveness. Self-forgiveness had the most influence on mental health, general health and social functioning, which are the most significant variables in mental and physical health.	relationship between empathy and other-forgiveness. Gender differences in social functioning should be examined as well. Other relationships to explore include elf-forgiveness and narcissism along with empathy and religion and empathy and situation forgiveness. Other mediating variables in the forgiveness/health relationship such as self blame, self-doubting, poor coping skills, poor social support, modesty, insecurity, and narcissism should be explored. Reliable measures, more forgiveness and health measures , longitudinal studies, and a larger, more diverse sample should be used in the future.
37. 2008	Parker	The Relation Between Hostility and Social Support: Investigating Potential Mediation or Moderation by Trait Forgiveness, Attributional Style, and Trait Empathy	Dissertation Abstracts International	Do trait forgiveness, attributional style, and trait empathy mediate or moderate the relationship between high hostility and low social support?	239 undergraduates (152 female) at West Virginia University, mostly Caucasian, Christian, and between ages 18-20.	Correlational; cross-sectional	*Cook Medley Hostility Questionnaire (Ho) *Social Support Questionnaire-6 (SSQ6) *Heartland Forgiveness Scale (HFS) *Attributional Style Questionnaire (ASQ) *Interpersonal Reactivity Index (IRI)	None of these variables proved to be mediators or moderators of the relationship between hostility and social support. Hostility was negatively related to forgiveness and quality of social support, and quality of social support was positively related to quantity of social support, forgiveness, positive attributional style, and empathy. Forgiveness was also negatively related to negative attributional style.	What is the role of social skill in relation to hostility and social support? Longitudinal studies may better capture the resilience and deterioration of social support .
38. 2008	Lawler-Row, Karremans, Scott, Edlis-	Forgiveness, Physiological Reactivity and Health:	International Journal of Psychophysiology	Is the benefit of forgiveness on physical health due to a decrease in anger, or is	141 undergraduates (63 women), mean age 20.4 years.	Correlational; cross-sectional	*Critikon Dinamap Vital Signs Monitor, Model 1946 SX to assess heart rate and blood pressure *Acts of Forgiveness	State and trait forgiveness both impact cardiovascular responses in neutral and recall periods. They are also both related to anger, but this does not mediate	What other mechanisms might explain the relationship between forgiveness and health? What is forgiveness' relationship to

	Matityahou, & Edwards	The Role of Anger		there more to it than that?	Mostly single, non-smoking Caucasians.		Scale *Forgiving Personality Inventory *Behavioral Anger Response Questionnaire (BARQ) *Cohen-Hoberman Inventory of Physical Symptoms (CHIPS)	their relationship to blood pressure. The anger-out response style does account for the relationship between trait, but not state, forgiveness and cardiovascular responses. Anger has an undeniable influence on health, but the relationship between health and forgiveness seems to involve more than just the reduction of anger, and does not depend on style of anger.	rumination? Future studies should look at blood pressure and heart rate in smaller increments to be more accurate.
39. 2008	Lawler-Row & Reed	Forgiveness and Health in Women	Women's Reflections on the Complexities of Forgiveness (Edited Book)	What are the physiological correlates of forgiveness, and how do they differ between the genders?		Review		The relationship between physical health and forgiveness is similar among males and females. Both general and specific forgiveness are related to health (low blood pressure, less stress, fewer physical symptoms of illness, etc.) and a well-lived life. Women who are forgiving tend to be healthier, often via less stress, better conflict management, and higher well-being.	What else might moderate or mediate the relationship between forgiveness and health? Humility? Cognitive flexibility?
40. 2008	Tsuang & Simpson	A Commentary on Koenig's "Concerns About Measuring 'Spirituality' in Research"	Journal of Nervous and Mental Disease	Was Koenig right to assess the state of spirituality as desperately needing an accurate and conclusive definition?		Peer Commentary		Koenig makes an appropriate assessment of spirituality's role in research as requiring a more traditional and unique definition.	Future research should indeed determine the most accurate and unique definition of spirituality, or else halt research involving the construct entirely to avoid inaccurate conclusions.
41. 2008	Koenig	Concerns About Measuring 'Spirituality' in Research	Journal of Nervous and Mental Disease	Is spirituality being accurately measured?		Review		Though spirituality is correlated with good mental health, it should not be measured by assessing other things that are associated with good mental health (i.e. positive character traits such as optimism and forgiveness). Spirituality is neither these	Future research needs to determine the most accurate and unique definition of spirituality, or else deem spirituality an unmeasurable construct that should not be researched further due to potentially inaccurate conclusions.

								things nor their sum and needs to be accurately defined to avoid further misguided research.	
42. 2007	Root & McCullough		Low-Cost Approaches to Promote Physical and Mental Health: Theory, Research, and Practice	What is known about forgiveness, its relationships to important variables such as health, and its interventions?		Review		As the components, predictors, and relationships involved in forgiveness continue to be researched, enough is known at this point to merit use of forgiveness interventions in a public domain.	A writing program should be studied for public dissemination as a low-cost intervention for promoting forgiveness.
43. 2007	Faison	The Relationship of Forgiveness to Psychological Resilience and Health Among African American Women	Dissertation Abstracts International	Is there a relationship between forgiveness, resilience, and health in African American women?	300 African American women from 24 out of the 50 United States, aged 18-75. Most had undergraduate degrees and were of the Christian faith	Correlational; cross-sectional	*Trait Forgivingness Scale (TFS) *Resilience Scale (RS) *Short Form-12 Version 2 Health Survey (SF-12v2)	Forgiveness was shown to be related to resilience, even more related to mental health, but not significantly related to physical health.	Forgiveness' relationship with mental and physical health, resilience, religion, spirituality, depression, gender differences, women's studies, and racial differences should be explored. More experimental methodology should be utilized in future studies. The processes within forgiveness and the role of positive emotion should be more closely examined. Unhealthy populations should be investigated in terms of forgiveness and health.
44. 2007	Robinson	Life Course Religiosity and Spirituality and Their Relationship to Health and Well-Being Among Home-Bound Older Adults	Dissertation Abstracts International	What is the relationship among religiosity, spirituality, physical health, and mental well-being in home-bound older adults?	200 homebound adults over age 60 (160 female) from urban and suburban Birmingham, mean age 79. Mostly Caucasian, were not cognitively impaired or terminally ill. Very few college educated, most with	Correlational; longitudinal	*Religious/Spiritual History Scale *Religious Support Scale *Medical Outcomes Study Social Support Survey *Forgiveness Scale – Short Form *Outcome and Assessment Information Set (OASIS) – Supportive Assistance Section *One-item measure assessing poverty *Standard 6 Item Indicator Set for Classifying	Physical health was positively correlated to life course extrinsic religious activities and support. Both intrinsic and extrinsic religious practices, instrumental and emotional support, and being African American were positively correlated with mental health. Thus, once homebound, continuing frequency and intensity of intrinsic and extrinsic religious practices is beneficial for mental and physical health and well-being.	A longer period of time should be given between baseline and followup in future studies. More research is needed on intrinsic/extrinsic religious activities and faith so that better measures can be developed to explore their relationships. Religion and spirituality need to be more firmly defined and operationalized for appropriate measurement and conceptualization.

					high school degree		Households by Food-Security Status Level *Religious Preference Scale *Charlson Comorbidity Index *Short Form-36 Health Survey (SF-36)		
45. 2007	Ozaki & Oku	The Authentic Meaning of Spiritual Healing	Journal of International Society of Life Information Science	What is spiritual healing?		Review		Because spiritual healing is something that happens in the soul as opposed to the mind/body connection, it does not necessarily translate into a healthier body or mind. Successful spiritual healing can be thought of as a moral transformation, which involves forgiveness, acceptance, and other thoughts and behaviors which transcend the self.	The phenomena involved in spiritual healing need to be further studied. More narrative type research that can be related to and explained by physics is needed.
46. 2007	Cloud	Does Forgiveness Add to the Relationship Between Spirituality and Physical Health?	Dissertation Abstracts International	Can physical and emotional health be better predicted when forgiveness is added to religious and spiritual well-being?	177 adults (111 women)	Correlational; cross-sectional	*Rand 36-Item Short Form Health Survey (SF-36)	Forgiveness of others does not appear to contribute to the relationship between spirituality and physical health and emotional functioning. Forgiveness of self, however, did contribute significantly to the relationship between spirituality and emotional functioning.	
47. 2006	Fincham, Hall, & Beach	Forgiveness in Marriage: Current Status and Future Directions	Family Relations	What is the major research on forgiveness in marriage?		Review		Research on forgiveness and marriage thus far has shown that forgiveness is related to relationship satisfaction, ambivalence, conflict resolution, attribution style, relationship commitment, empathy, and marital forgiveness interventions. In terms of practice, the importance of psychoeducation, time, types of forgiveness, communication, perspective, and context should be noted.	The field needs to integrate research, theory, and practice to move away from intuition and toward empiricism. More research is needed on <i>seeking</i> forgiveness as opposed to just granting it, the role of self-forgiveness in marriage and at large, and the role religion/faith/sanctity plays in the forgiveness/marriage relationship.

48. 2006	Suchday, Friedberg, & Almeida	Forgiveness and Rumination : A Cross-Cultural Perspective Comparing India and the U.S.	Stress and Health	How does the relationship between forgiveness, rumination, and health in a non-Western sample compare to the relationship in a non-Western sample?	188 college students (96 female) from a Jesuit university in Mumbai, India, aged 17-22 (mean age 18.9). Half of the participants were Hindu. This sample was compared to a sample of 71 students and staff at a graduate school in New York City, mostly female and Caucasian.	Correlational; cross-sectional	*Six items assessing dispositional forgiveness *Six items assessing tendency to ruminate *Perceived Stress Scale (PSS) *Cohen-Hoberman Inventory of Physical Symptoms (CHIPS)	The relationship between forgiveness, rumination, and health is similar in Western and non-Western samples, suggesting this relationship may be universal. Lower forgiveness led to increased rumination and stress, but did not relate to physical symptoms. The forgiveness and stress relationship was mediated by rumination.	Physiological responses to stress related to forgiveness should be studied in an Indian sample. A more generalizable sample should be used in future studies, particularly in terms of age range.
49. 2006	Hernandez	Hostility, Forgiveness, and Cardiovascular Reactivity to Stress: Does Forgiveness Mediate or Moderate Between Hostility and Cardiovascular Reactivity to Anger-Eliciting Laboratory Experiences?	Dissertation Abstracts International	Does forgiveness mediate or moderate Between Hostility and Cardiovascular Reactivity to Anger-Eliciting Laboratory Experiences?	42 unmarried male undergraduates, aged 18-38 (mean age 19.7). Mostly Caucasian.	Quasi-experimental; cross-sectional	*Mental Arithmetic Task *Interpersonal Role Play *Cook Medley Hostility Scale (HO) *Heartland Forgiveness Scale (HFS) *State-Trait Anger Expression Inventory (STAXI) *Anger Rating Scale (ARS) *Transgression-Related Interpersonal Motivations Inventory (TRIM) *Forgiving Attitudes Questionnaire (FAQ) *Grass Model 7 Polygraph *Blood pressure cuff	Though highly hostile participants experienced less forgiveness than less hostile participants, forgiveness was not shown to mediate or moderate the relationship between hostility and cardiovascular reactivity to lab activities designed to elicit anger.	What could be causing such an inconsistent relationship between hostility and cardiovascular response? Are religion and spirituality a factor, or perhaps styles of expressing anger or unique characteristics embodied by highly hostile individuals? Longitudinal studies examining those low vs. high in forgiveness could shed light onto this relationship as well as long-term health outcomes. Time should also be examined as necessary for forgiveness to mediate or moderate this relationship. Gender differences here should be explored as well, and forgiveness should be dissected and measured alongside physiological

									indices to determine if any one part of forgiveness has greater health implications.
50. 2006	Crawley	Attachment and Forgiveness as Mediators Between Childhood Abuse and Self-Esteem	Dissertation Abstracts International	Are attachment and forgiveness mediators in the relationship between childhood abuse and self-esteem?	296 undergraduates (218 women) (113 from community college, 183 from private university), aged 18-52 years (mean age 19.4). Half were Caucasian, all had experienced some level of abuse.	*Correlational ; cross-sectional	*Childhood Maltreatment Interview Schedule – Short Form (CMIS-SF) *Experiences in Close Relationships – Revised (ECR-R) *Heartland Forgiveness Scale (HFS) *Self-Esteem Rating Scale (SERS)	A history of childhood abuse was related to insecure attachment style, ability to forgive, and self-esteem. Insecure attachment mediated the relationship between abuse and self-esteem, and ability to forgive mediated the relationship between insecure attachment and self-esteem.	More potential mediators of this relationship should be explored (personality traits, resiliency, coping skills, type of relationship etc.). Clinical implications of these findings should be explored. The relationship between type of childhood abuse, age of occurrence, and resiliency should be examined in future research.
51. 2006	Lawler-Row & Piferi	The Forgiving Personality: Describing a Life Well-Lived?	Personality and Individual Differences	What is the relationship between dispositional forgiveness and health outcomes, and what are some potential mediators?	425 adults (243 women), aged 50-95 (median age 59.5). Mostly Caucasian, married, and religious.	Correlational; cross-sectional	*Forgiving Personality Inventory (FP) *Cohen-Hoberman Inventory of Physical Symptoms (CHIPS) *RestQ *Beck Depression Inventory *Satisfaction with Life Scale (SWLS) *Scales of Psychological Well-Being, Abbreviated Version (PWB) *Health Behavior Checklist (HB) *Social Provisions Scale (SS) *Spiritual Well-Being Scale	Trait forgiveness was related to well-being, stress, and depression, and was higher in women, individuals over the age of 60, and those who attend church frequently. Healthy behaviors, social support, and spiritual well-being were mediators of the relationship between the forgiving personality and physical health, while forgiveness still maintained a unique contribution. The positive influences of forgiveness, such as better relationships and well being, are even larger than the reduction of negative influences it is also associated with.	Future longitudinal studies should examine whether a forgiving personality can cause higher subjective well-being and successful aging
52. 2006	Máté	The Psychology of Forgiveness: Its Origin, Its	Mentálhigiéné és Pszichoszomatika	What is forgiveness, what does it do, and how is it being promoted?		Review		Forgiveness is an emotion-focused coping strategy that can be beneficial for reducing the stress of a transgression. It is associated with lower	

		Effects, and Its Promoting						levels of depression and anxiety, as well as a reduced physiological response to stress. Recent research indicates that interventions are proving efficacious in promoting forgiveness.	
53. 2005	Tsuang, Eaves, Nir, Jerskey, & Lyons	Genetic Influences on Forgiving	Handbook of Forgiveness (edited book)	What are the genetic factors that influence forgiving?		Review		Exploration of genetic factors on forgiveness is very limited, despite the fact that many other dispositional factors have been examined genetically. It may be that because forgiveness is so heavily influenced by social factors, that the interaction of genetics and environment has a far greater impact on forgiveness than genetics alone, which also makes the genetics involved harder to determine.	Twin studies and other genetic avenues for researching forgiveness are in order, which may reveal connections between forgiveness and other genetically influenced traits.
54. 2005	Farrow & Woodruff	Neuroimaging of Forgivability	Handbook of Forgiveness (edited book)	How can neuroimaging be used to help us better understand forgiveness?		Review		fMRI s have been used to examine brain activity for forgiveness, its components, and even its withholding. While it can be somewhat unsettling to reduce moral emotions and behaviors to a neurological process, this area is promising for revealing neurological foundations of forgiveness and how it can impact physical health.	How does the neurobiology of other emotions, such as the six basic emotions, influence ability to forgive on a neurological level? Future studies should examine where specifically these emotions take place in the regions known to house these emotions, and how they impact forgiveness.

55. 2005	Sapolsky	The Physiology and Pathophysiology of Unhappiness	Handbook of Forgiveness (edited book)	What is the physiological background of the stress response, and how does it relate to psychological, social, and personality factors?		Review		Stress can be adaptive and appropriate if experienced at the right time for the right amount of time. However, when it lasts too long or pervades inappropriate aspects of life, it can increase risk of disease. The impact of social rank on stress is dependent upon the species and the state of society. Socioeconomic status has many health implications, but perceived SES is even more important than actual SES in this area. This “feeling poor” as a predictor of health is unique to humans. The way in which stressors such as these are perceived has the real impact on health.	Though regarded as common knowledge, more empirical research is needed regarding the impact of stress on cancer and how reducing stress can increase the odds of survival.
56. 2005	Witvliet	Unforgiveness, Forgiveness, and Justice: Scientific Findings on Feelings and Physiology	Handbook of Forgiveness (edited book)	What are some physiological correlates of unforgiveness, forgiveness, and justice?		Review		State and trait unforgiving physiological responses (self-report, cardiovascular reactivity, and facial expressions) show a more prolonged and negative effect than forgiving responses. Unforgiveness processes like rumination, avoidance, and revenge may perpetuate circuits involving attentional, motivational, physiological, and behavioral components of emotion, which can lead to anxiety, depression, hostility, hypertension, and heart disease. The best way to assess this is cardiac vagal tone – greater regulation of emotions is associated with greater variation around mean heart rate. Forgiveness and the calming of emotions may be more associated	Both the central and peripheral nervous systems should be examined when studying physiological correlates of forgiveness. Considering heart rate variation as an independent variable instead of a dependent variable may reveal insight into forgiveness. What else might be associated with heart rate variation (religion, spirituality, virtue)? Relaxation and other ways to improve heart rate variation should be researched as interventions to accompany traditional forgiveness intervention. Genetic, hormonal, nervous system, and behavioral measures should all be used in future research. Making these results more generalizable

								with the parasympathetic nervous system, while reducing anger may be reducing the sympathetic nervous system. A restorative approach to justice that promotes forgiveness can be more beneficial than punishing.	should be a major goal of future research.
57. 200 5	Harris & Thores en	Forgiveness, Unforgiveness, Health, and Disease	Handbook of Forgiveness (edited book)	What are the current hypotheses and models regarding the relationship between forgiveness, unforgiveness, health, and disease?		Review		<p>Hypothesis 1: unforgiveness is associated with health risks much like other stress responses, perhaps due to its relationship to emotions and behaviors that are already known to cause harm.</p> <p>Hypothesis 2: forgiveness has benefits beyond reducing unforgiveness, such as those associated with positive affect.</p> <p>Hypothesis 3: forgiveness interventions influence health outcomes.</p>	More research should examine how unforgiveness is similar to other chronic stressors across time. Positive states related to forgiveness should also be examined for similarities. Indirect models should be evaluated, and both forgiveness and its measurement need refining. More longitudinal studies are needed. The stress-coping research should serve as a template for continuing forgiveness and health research. Differences in impact of state and trait forgiveness on health should be examined.
58. 200 5	Toussaint & Webb	Theoretical and Empirical Connections Between Forgiveness, Mental Health, and Well-Being	Handbook of Forgiveness (edited book)	What are the theoretical and empirical studies on forgiveness and mental health?		Review		It is important to prove that forgiveness is related to mental health, since mental health is so closely tied to physical health. Models of forgiveness and mental health include direct, indirect, developmental, and attributional. Current research suggests that there is an undeniable relationship between forgiveness and mental health, but what remains is how big of a relationship as well as its mechanisms.	Forgiveness measurement, especially for each variety of forgiveness, needs improvements if its relationships are going to be further examined. Studies need to be more generalizable and include intervention and experimental studies. The causal relationship between forgiveness and rumination and other potential mediators should continue to be explored. Mental health status should be considered a moderator in the relationship between forgiveness and other

									constructs. What does a forgiving person's personality look like?
59. 200 5	Noll	Forgiveness in People Experiencing Trauma	Handbook of Forgiveness (edited book)	How should trauma be studied and treated with regard to forgiveness? How is forgiving a perpetrator of trauma different from other types of forgiveness? What are the costs and benefits of forgiving in the case of a violent trauma?		Review		Forgiveness and trauma is a relatively un-researched field, and should be considered a very sensitive topic in which forgiveness is not always possible or in the victim's best interest. Forgiveness may be associated with making sense of the trauma and coping.	The relationship between forgiveness and PTSD should be examined more thoroughly. Is forgiveness always the best option in trauma? Why would one be motivated to forgive a sexual abuse perpetrator? Is religion a factor? Why is sexual trauma different and so hard to forgive? The development of forgiveness should be assessed longitudinally in abuse and trauma victims.
60. 200 5	Lawler, Younger, Piferi, Jobe, Edmondson, & Jones	The Unique Effects of Forgiveness on Health: An Exploration of Pathways	Journal of Behavioral Medicine	What are some mechanisms in the relationship between forgiveness and health?	81 adults (62 women) from the community, aged 27-72 (mean age 42.6). Mostly Caucasian, half were married.	Correlational; cross-sectional	<ul style="list-style-type: none"> *Acts of Forgiveness Scale (AF) *Transgression-Related Interpersonal Motivations Inventory (TRIM) *Forgiving Personality Inventory (FP) *Cohen-Hoberman Inventory of Physical Symptoms (CHIPS) *RestQ *Interpersonal Competence Questionnaire (ICQ) *Spiritual Well-Being Scale *Profile of Mood States *Perceived Stress Scale (PSS) *Critikon Dinamap Vital Signs Monitor, Model 1846SX) 	Decreased reactivity was associated with trait forgiveness, but this reactivity did not mediate the relationship between forgiveness and health. Reduction of negative affect was the strongest mediator of the relationship (for both state and trait forgiveness), and spirituality, social skills, and reduction in stress all mediated the relationship at least partially. Trait forgiveness involved reduction in stress and conflict management, and state forgiveness involved reduction in stress as an avenue for physical health.	Need more experimental studies. Is age a factor in the influence of forgiveness and these mechanisms on health? Relationship between victim and transgressor and nature of offense need to be taken into account.
61. 200 5	Romero	Writing Wrongs: An	Dissertation Abstracts International	Are two writing interventions	33 older adults (87.1% female) from	Experimental; longitudinal	<ul style="list-style-type: none"> *Brief Symptom Index (BSI) *State-Trait Anxiety 	The empathy intervention produced the highest forgiveness, followed by	Longitudinal designs are needed, as well as larger and more balanced sample sizes

		Intervention to Promote Forgiveness and Health in Early and Late Adulthood	1	for promoting forgiveness and physical health efficacious? Will age be a factor ?	community groups in Chicago and Los Angeles. Mostly Caucasian and Catholic, aged 58-92 (mean age 72.97). 69 undergraduates (85.5% female) from the University of Loyola-Chicago, aged 17-28 (mean age 18.85). About half Caucasian, mostly Catholic and single. All could identify a painful transgression.		Inventory – State Form (STAI-S) *Geriatric Depression Scale – Short Form (GDS-SF) *Beck Depression Inventory – 2 nd Version (BDI-II) *Satisfaction with Life Scale (SWLS) *Descriptions/ratings of the offense *Wade Forgiveness Scale (WFS) *Single item to assess forgiveness *Batson’s Empathy Adjectives (BEA) *Perspective-Taking Scale (PTS) *Social Connectedness Scale – Revised (SCS-R) *Interpersonal Reactivity Index (IRI) *Letter to the offender *Conditional integrity checks *Linguistic Inquiry and Word Count (LIWC) Software *Offense Disclosure Intervention *Empathy/Benefits Intervention *Daily Events Control Activity	the intervention involving the expression of thoughts and feelings about the offense. The control group which wrote about daily events showed little forgiveness. The intervention results held for older and younger adults, though older adults were more forgiving in general. Situation and disposition may influence the benefits of expressive journal writing, as offense severity, level of hurt, and dispositional empathy moderated the effects of journal writing on both forgiveness and health. Empathy and social connectedness mediated the relationship between writing and forgiveness, thus serving as causal mechanisms between writing and forgiveness.	in the future. Future research should include more methods of assessing forgiveness and continue to study the effects of expressive writing on health.
62. 2005	Bauman	The Role of Forgiveness in Rehabilitation	Dissertation Abstracts International	Does the forgiveness process influence rehabilitation outcomes?	Case Study 1: 73 year old Irish Catholic woman on the pulmonary unit at Burke Rehabilitation Hospital – had unresolved forgiveness issues Case Study 2:	Case studies (2)	Testimony of two patients	The author presents revisions to Enright’s model of forgiveness. In two case studies, asking for and granting forgiveness helped both of these patients to continue with their physical therapy, giving them hope and purpose and relinquishing them of guilt and emotional burden.	What is the role of ritual in the forgiveness process, both individual and congregational? More research on forgiveness and rehabilitation is needed. What is the prevalence of unforgiveness standing in the way of successful physical therapy? How effective is pastoral care in these instances?

					72 year old Caucasian Presbyterian woman who had just undergone a knee replacement at Burke Rehabilitation Hospital				
63. 2005	Rippen trop, Altmaier, Chen, Found, & Keffala	The Relationship Between Religion/Spirituality and Physical Health, Mental Health, and Pain in a Chronic Pain Population	Pain	What is the relationship between religion/spirituality and physical and mental health in chronic pain patients?	122 patients (68 female) , mean age 52.7 years, with chronic musculoskeletal pain at a large Midwestern University medical center. Mostly married, Caucasian, with at least a high school degree	Correlational; cross-sectional	*Brief Multidimensional Measure of Religiousness/Spirituality *Short Form-36 Health Survey (SF-36) *McGill Pain Questionnaire – Short Form (SF-MPQ) *Interference Scale from the Multidimensional Pain Inventory (MPI)	Pain patients differ in their religiosity and spirituality than the rest of the population in that they feel less desire to reduce pain in the world and feel more abandoned by God. Religious activities such as prayer and meditation were negatively correlated with health, suggesting that those in poorer health tend to turn more to religion. Despite this, level of pain was not associated with religiosity/spirituality. Mental health was related to forgiveness, negative religious coping, daily spiritual activities, religious support, and self-report of intensity of religiosity/spirituality. Thus, religion and spirituality do have relationships with health in a chronic pain population, some positive and some negative.	Costs of religion on health should be examined in addition to its benefits. Forgiveness, negative religious coping, and anger should be studied as potential mediators in the religion/spirituality and health relationship. Longitudinal studies are necessary to determine the long-term impact of religiosity/spirituality on chronic pain , and the sample should be wider, demographically.
64. 2005	Goldfarb	The Emergence, Expression, and Integration of Forgiveness: A Psychodynamic	Dissertation Abstracts International	What is the process of change with regard to psychodynamic psychotherapy and achieving forgiveness?	An adult female client of the researcher in Southern California who had been engaged in psychotherapy for four	Case Study	*Process notes from psychotherapy *Transcriptions from sessions *Supervision notes *Researcher's notes	The forgiveness process does not have a definite beginning or end. The client's forgiveness involved many gradual intrapsychic changes, and this process will vary from person to person. She eventually developed empathy for her abuser as a	The relationship between forgiveness and the type of change usually associated with working through problems in psychodynamic therapy needs to be further examined. Is forgiveness voluntary?

		Exploration and Case Study			years, enduring a long-term interpersonal conflict			result of her own internal changes and new representation of her abuser. Her more realistic and not fantastical representation was crucial to her forgiveness experience. Intrapsychic changes and forgiveness appear to be critically linked.	
65. 2005	Rivard	Motivational Dispositions to Forgive in Incarcerated Women with Trauma Histories	Dissertation Abstracts International	In incarcerated women with a history of trauma, what is the association among forgiveness, personality, trauma history, relationship satisfaction, closeness, and commitment, perceived offense severity, intention, apology, and empathy?	81 women aged 19-49, (mean age from the Women's Unit at the Hamden County Correctional Center in Ludlow, MA. Half were Caucasian, heterosexual, and were in a relationship, and most had some level of high school education. Most were religious and had children.	Correlational; cross-sectional	<ul style="list-style-type: none"> *2 items assessing religiosity *Trauma History Questionnaire *Big Five Inventory (BFI) *Dissipation-Rumination Scale *Hurtful Events Scale (HES) *Empathy Scale *Inclusion of Other in Self Scale (IOS) *Transgression-Related Interpersonal Motivations Inventory (TRIM) *4 items assessing offender-focused affective empathy *Structured interview *Brief Symptom Inventory, 4th Edition (BSI) 	The TRIM inventory is useful for measuring interpersonal forgiveness, which is associated with trauma history, empathy, and certain personality traits. Relational closeness, satisfaction, commitment, offense severity, intent to harm, apology, and time elapsed were associated with forgiveness. The type of relationship with the transgressor and the empathy felt toward the transgressor were the biggest predictors of forgiveness. Women who experienced assault at a young age were less likely to be benevolent and more likely to avoid and avenge when the transgressor is a parent. General disasters indicated a greater empathy and forgiveness toward a partner.	Future studies should be more generalizable to an incarcerated population. Forgiveness of self should be further explored. Empathy should be examined more thoroughly. Emotional healing, survival strategies, and resiliency should be further explored.
66. 2005	Edmondson	Forgiveness and Rumination: Their Relationship and Effects on Psychological and Physical Health	Dissertation Abstracts International	What is the relationship among forgiveness, rumination, and psychological and physical health?	60 female college students aged 18-49 (mean age 21.07). Half were Caucasian and in a relationship	Correlational; cross-sectional	<ul style="list-style-type: none"> *Critikon Dinamap Vital Signs Monitor, Model 1946 SX *Saliva *Ruminative Responses Scale (RRS) from the Response Styles Questionnaire (RSQ) *Behavioral Anger Response Questionnaire 	State forgiveness was associated with rumination, but trait forgiveness was not. Forgiveness was related to depression and anxiety, though not directly to measures of physical health. Those higher in forgiveness had lower cortisol levels than those low in forgiveness, and state forgiveness was	A larger and more generalizable sample is needed in future studies. Do men and women differ in what predicts forgiveness since women are more likely to ruminate? An experimental design, preferably with the inclusion of a rumination group and a distraction group, would be helpful in

							(BARQ) *Forgiving Personality Inventory *Acts of Forgiveness Scale (AF) *Transgression-Related Interpersonal Motivations Inventory (TRIM) *Cohen-Hoberman Inventory of Physical Symptoms (CHIPS) *Beck Depression Inventory (BDI) *State/Trait Anxiety Scale (STAI) *Interpersonal Reactivity Index (IRI) *Single item measures of offense-related	associated with higher mean arterial pressure when discussing the betrayal, but not when ruminating. Rumination, overall, appears to be a bigger part of the equation than even event-related variables in the forgiveness and health relationship.	determining causality and directionality. More cortisol samples throughout future studies will help determine physical symptomology.
67. 2005	Gregory	Comparing Forgiveness Interventions: An Extended Group vs. Brief Expressive Writing Exercise	Dissertation Abstracts International	Is there a difference between Worthington's REACH forgiveness intervention and a brief expressive writing intervention when it comes to health outcomes?	80 undergraduates in Southeast Idaho (50 female), aged 18-38 years (mean age = 21.77). Mostly Caucasian.	Experimental; longitudinal	*Enright Forgiveness Inventory (EFI) *Transgression-Related Interpersonal Motivations Inventory (TRIM) *Interpersonal Reactivity Index (IRI) *Short Form-36 Health Survey (SF-36) *Pennebaker Inventory of Limbic Languidness (PILL) *Blood pressure cuff *Saliva *Positive and Negative Affect Schedule (PANAS) *Outcomes Questionnaire (OQ)	Both interventions caused changes over time, but neither produced changes in forgiveness. Both writing intervention and control participants experienced increased positive affect, fewer thoughts of avoidance and revenge, fewer physical health and pain symptoms, and less personal distress. Both group intervention and control participants experienced increased positive affect and behaviors, less revenge and avoidance, lower pulse and pain, and fewer physical health symptoms. Measures of forgiveness were shown to be largely unrelated to health. This may be due to low severity transgressions experienced by the participants.	Future studies should be certain that their generalizable population has significant transgressions to forgive. Interventions should take the time necessary to achieve forgiveness, not an arbitrary timeframe. Forgiveness should continue to be defined, and its mechanisms should be further explored, and interventions should continue to be refined. Physical and mental health outcomes should be examined before and after forgiveness interventions. Individualizing treatments may prove to be a valuable future direction. Ongoing, not just past transgressions should be examined in terms of associations and intervention.
68. 2004	Witvliet, Phipps	Posttraumatic Mental and	Journal of Traumatic Stress	What are the physical and mental health	213 male veterans with PTSD from a	Correlational; cross-sectional	*Clinician Administered PTSD Scale – Diagnostic	Difficulty with forgiveness of others was related to depression and PTSD	How can forgiveness and religious coping continue to contribute to trauma

	, Feldman, & Beckham	Physical Health Correlates of Forgiveness and Religious Coping in Military Veterans		variables correlated with with dispositional forgiveness and religious coping in veterans with PTSD?	Veterans Affairs Medical Center outpatient PTSD clinic in the southeast. Mostly African American, mean age was 50.8 years, and most were lower middle class.		Version (CAPS) *Forgiveness of Others Scale *Forgiveness of Self Scale *Brief Religious Coping Scale *Davidson Trauma Scale for PTSD (DTS) *Mississippi Scale for Combat-Related PTSD *Beck Depression Inventory (BDI) *Spielberger State Trait Anxiety Inventory *Cook-Medley Hostility Scale – Short Form *Medical Questionnaire from the National Vietnam Veterans Readjustment Study (NVVRS)	symptom severity, while self-forgiveness and negative religious coping were related also related to these as well as anxiety. Positive religious coping was also associated with severity of PTSD symptoms. Overall physical symptoms and condition were not related to either kind of forgiveness or religious coping.	interventions? These results should be compared with veterans who are not diagnosed with PTSD, as well as those with other variations such as gender, SES, time in combat, nature of combat, and other disorders of the body or mind. Forgiveness of self and positive religious coping should be considered in future forgiveness research.
69. 2004	MacNulty, III	Self-Schemas, Forgiveness, Gratitude, Physical Health, and Subjective Well-Being	Dissertation Abstracts International	How do self-schemas influence forgiveness and gratitude, and is the relationship between self-schemas, physical health, and well-being mediated by forgiveness and gratitude?	802 participants (74.6% women) aged 18-74 (mean age 29). Mostly Caucasian, recruited online or from an undergraduate psychology pool at a state university in Northern California	Correlational; cross-sectional	*Flexible Inflexible Schema Belief Inventory – Abbreviated (FISBI) *Wisconsin Personality Inventory: Narcissism Subscales (WISPI) *Experience of Shame Scale: Characterological Shame Subscale (ESS) *Interpersonal Reactivity Index: Perspective Taking and Empathic Concerns Subscales (IRI) *Gratitude Questionnaire – 6 Item Form (GQ-6) *Gratitude, Resentment, and Appreciation Test –	Self-schemas are related to forgiveness and gratitude, and though forgiveness is related to physical health and well-being, gratitude was related to well-being but not physical health. This study also supports that schemas operate on a polar continuum.	What are the effects of age, culture, ethnicity, age, and gender on self-schemas, empathy, forgiveness, and gratitude? What, if any, is the relationship between gratitude and health? Can gratitude and forgiveness be changed by schema intervention? Longitudinal studies are needed to examine these effects over time.

							Short Form (GRAT) *Trait Forgivingness Scale – 10 Item Form (TFS-10) *Transgression-Related Interpersonal Motivations Inventory (TRIM) *Satisfaction With Life Scale (SWLS) *Subjective Happiness Scale (SHS) *Physical Symptoms Checklist *3 single-item measures of general health *WISPI Social Desirability Subscale		
70. 2004	Porter	Personal Narratives as Reflections of Identity and Meaning: A Study of Betrayal, Forgiveness, and Health	Dissertation Abstracts International	Does the interviewer impact the narrative and forgiveness process? Are self-report measures and narrative measures of forgiveness comparable? Can a personal narrative predict state or trait forgiveness? Does a personal narrative relate to physiological measures?	108 (64 women) undergraduates at a large state university in the southeastern United States, aged 18-35 (mean age = 20.44 years). Mostly Caucasian.	Correlational; cross-sectional	*Acts of Forgiveness Scale (AF) *Forgiving Personality Inventory (FP) *Personal narrative	The interview can affect richness and coherence of the personal narrative, but neither of these is associated with state or trait forgiveness. They are, however, related to physiological measures – both were negatively related to blood pressure. Conflict formulation was significantly related to state forgiveness. Narrative quality was able to predict state forgiveness, but not trait.	Future studies should have a more generalizable sample that does not limit itself to the typical developmental transgressions of a college student. Different age groups should be accessed not only for this reason, but because this age group is generally healthy, making it difficult to find differences. Tracking narrative changes over time would bring insight to the forgiveness process. Verbal and written accounts over time should be compared. Integrating situational and dispositional forgiveness should be a goal of future studies.
71. 2004	Raney	Influence of Forgiveness on Posttraumatic Stress Disorder,	Dissertation Abstracts International	What is the role of forgiveness in PTSD in terms of depression and aggression?	247 male Vietnam veterans from the Durham VAMC, aged 43-73 (mean age = 52)	Correlational; cross-sectional	*Davidson Trauma Scale for PTSD (DTS) *Combat Exposure Scale *Wartime Violence *Forgiveness of Others	Guilt distress, neuroticism, and vengefulness were the forgiveness factors most related to PTSD symptoms. Exposure to hurt and killing was the biggest military factor in relation	What would a forgiving attitude toward the enemy do in terms of PTSD? What kind of forgiveness should be encouraged for veterans, and at what point in combat? Do PTSD

		Depression, and Aggression in Vietnam Veterans			years). About half African American, married, and unemployed or retired.		*Forgiveness of Self *Beliefs About Revenge Questionnaire *Trauma-Related Guilt Inventory (TRGI) *Beck Depression Inventory *Conflict Tactics Scales *Personality Psychopathology Five (PSY-5)	to PTSD, and this relationship was even stronger when interacting with high other-forgiveness and low self-forgiveness. Self-forgiveness and re-experiencing were related to depression. Aggression was associated with hyperarousal, but only in cases of low to average other-forgiveness. Other forgiveness also lessened the relationship between depression and aggression. Hurting and killing seems to be more associated with PTSD than mutilation.	symptoms have a bidirectional effect on combat experiences? Longitudinal studies of veterans and forgiveness are needed. Are forgiveness, guilt, vengeance, and neuroticism dependent on personality, experience, or PTSD? A sample of varying levels of PTSD would be useful in future investigations. Mediation effects supported in this study should continue to be researched.
72. 2004	Rashid	Enhancing Strengths Through the Teaching of Positive Psychology	Dissertation Abstracts International	Does participating in a positive psychology class enhance VIA character strengths more than not taking a positive psychology class? Can non-signature strengths be enhanced? Are subjective and objective appraisals of signature strengths similar? Are VIA strengths related to life conditions?	Experimental group: 35 undergraduate and graduate students (83% female) at a metropolitan campus, mean age = 23.4 years. Half Caucasian, mostly single. Control group: 30 undergraduate and graduate students (90% female) at a metropolitan campus, mean age = 25.05 years. Mostly single.	Quasi-experimental; longitudinal	*Positive Psychology course (experimental manipulation) *Abnormal Psychology course (control group) *Composites of social support, health, spirituality, volunteerism, and life satisfaction *Values in Action Inventory of Strengths (VIA-IS)	The group exposed to the positive psychology class improved significantly on a number of VIA character strengths, particularly signature strengths, which were easily changed but not always recognized by 3 rd parties. Non signature strengths did not significantly change. Strengths such as intimate attachment, kindness, leadership, and forgiveness and mercy were mediated by peak physical health. Life conditions, including social support, health, spirituality, volunteerism, and life satisfaction all predicted particular strengths.	The developmental, stability, and functional outcomes of VIA strengths should be further examined. Longitudinal studies should last for several years as opposed to just one semester. Does enhancing one strength make it more likely that other strengths will be enhanced? The effects of strength enhancement on everyday functional outcomes should be examined in future studies.
73. 2004	Standard	Effects of a Forgiveness	Dissertation Abstracts International	Can forgiveness reduce	63 healthy, non-smoking, pre-	Experimental; longitudinal	*Cognitive-based forgiveness intervention	The forgiveness intervention significantly increased total forgiveness	Future intervention studies should examine morning cortisol reduction as an

		Intervention on Salivary Cortisol, DHEA, and Psychological Variables	1	psychological and physiological factors associated with health risks?	menopausal women (mean age = 38.6 years) from the community. Each had experienced a transgression to forgive.		<ul style="list-style-type: none"> *Microtitre plates for measuring cortisol and DHEA *Interpersonal Adjective Scale *State-Trait Anxiety Inventory (STAI) *Heartland Forgiveness Scale (HFS) *Forgiveness Self-Efficacy Scale *Beck Depression Inventory (BDI) *Perceived Stress Scale (PSS) *Constructive Anger Behavior Scale *Hostile Automatic Thoughts *Scales of Psychological Well-Being *Positive and Negative Affect Schedule (PANAS) *Medical Outcomes Study Short Form-12 (SF-12) *Religious-Spiritual Experiences/Religious and Spiritual Importance Items *The Hope Scale *Positive States of Mind Scale 	and forgiveness self-efficacy, and positive affect increased and negative affect decreased. The forgiveness intervention reduced morning cortisol significantly and nighttime cortisol and morning DHEA marginally significantly, but not evening cortisol or DHEA.	avenue for decreasing the impact of depression. Further studies distinguishing between self and other forgiveness are needed. A more generalizable sample is needed. Future researchers should adapt the method of this study so they can examine more specific associations between forgiveness and changes in cortisol throughout the day. Interventions should also be more closely examined to determine where the changes are really being made.
74. 2003	Harris & Thoresen	Strength-Based Health Psychology : Counseling for Total Human Health	Counseling Psychology and Optimal Human Functioning (Edited Book)	How is positive psychology useful in health psychology?		Review		Integrating positive and health psychology may have implications for quality of life and development of physical and character strengths. The biomedical model is not only useful in understanding how people's negative traits hurt their health, but in how their positive traits benefit their health. Counseling psychologists	Future research should explore the influence of positive psychological variables on physical health and mental health. What is the directionality between positive psychology variables and health and behavior outcomes? Interventions involving positive psychological constructs should be examined. Better experimental design is

								can focus on forgiveness, social support, and religion/spirituality as major avenues for positive psychology to influence health and well-being. Each of these is capable of preventing problems, resolving problems, and enhancing quality of life.	needed in studies in this area. Moderating variables need to be established in order to better help people find the right intervention. Interventions should focus on the benefits of providing social support rather than just perceiving it. The relationship between religion/spirituality, coping, and health should be explored.
75. 200 3	Knight	Physical Characteristics as Determinants of Trait Attribution and Forgiveness	Dissertation Abstracts International	How do racial attitudes contribute to attribution of traits? Do these attitudes effect willingness to forgive?	47 (20 female) Caucasian participants aged 7-10 years who scored "nonstereotyped" on the Preschool Racial Attitude Measure	Quasi-experimental; cross-sectional	*Modified Preschool Racial Attitude Measure – II (PRAM-II) *Enright Forgiveness Inventory for Children – Revised (EFIC-R) *4 chromatic picture templates used to illustrate the story according to the condition of the participant	There was no difference in trait attribution or willingness to forgive, regardless of the race of the victim/transgressor.	Future studies should examine a wider breadth of ages in order to track developmental changes in racial attitudes and forgiveness. Geographic and ethnic diversity should be examined in future studies. An African American comparison group should be included in a similar studies. The modified PRAM-II needs further validation, and future studies should find more ways to accurately measure racial attribution.
76. 200 3	Webb	Spiritual Factors and Adjustment in Medical Rehabilitation: Understanding Forgiveness as a Means of Coping	Journal of Applied Rehabilitation Counseling	What is the role of forgiveness and spirituality in rehabilitation?		Review		Due to the nature of rehabilitation as necessary following some kind of human mistake or unfair circumstance, the role of forgiveness is crucial. Forgiveness as a spiritual coping mechanism can lead to better health outcomes.	The empirical process of forgiveness and its interventions needs to be very well understood. Spirituality also needs to be understood both for the benefit of the client and the therapeutic relationship.
77. 200 2	Connerly	Forgiveness: A Correlational Study Between the Spirit of Forgiveness	Dissertation Abstracts International	What is the relationship among forgiveness, hostility, anger and health in senior citizens?	203 senior citizens(145 female) aged 65-82 (mean age =) from two Catholic churches in	Correlational; cross-sectional	*Enright Forgiveness Inventory (EFI) *State-Trait Anger Expression Inventory - 2 (STAXI-2) *Cook Medley Hostility	Forgiveness and physical health were not correlated, but suppression of anger was related to health – particularly with regard to cardiovascular problems. Hostility was also related	The definition of forgiveness still needs refining. More longitudinal research on forgiveness is needed. What is necessary for forgiveness to take place – personality traits, morality,

		s and Physical Health in Senior Citizens			central Florida		Questionnaire (Ho) *Physical Health Status *Health Risk Inventory	to cardiovascular problems.	spirituality, nature of relationship? What is the role of religion and guilt? Does level of remorse/guilt predict forgiveness? How do SES, discrimination, and religion influence forgiveness? The relationship between forgiveness and anger should be further researched. Transgressions should be controlled for in time and severity.
78. 2002	Vas	Expressive Writing about Interpersonal Offenses: Effects on Forgiveness and Health	Dissertation Abstracts International	What is the role of expressive writing on forgiveness and physical and mental health?	*150 undergraduates (77.9% female) from a medium-sized, urban, private university. Mostly Caucasians living in university housing and without psychological problems. Half Catholic.	Experimental; longitudinal	*Writing about an interpersonal transgression (group 1) *Writing about an emotional experience (group 2) *Writing about a daily activity (control group) *Symptom Checklist-90-Revised (SCL-90-R) *Brief Symptom Inventory *Wade Forgiveness Scale (WFS) *Essay Evaluation Measure (EEM) *Positive and Negative Affect Scale (PANAS) *Linguistic Inquiry and Word Count (LIWC)	Neither expressive writing about interpersonal offenses nor emotional experiences was not positively associated with forgiveness or health, and in fact tended to perpetuate rumination and contribute to negative health outcomes. Expressive writing could be a better forgiveness intervention if structure were provided for writing about the offense in a way that facilitates forgiveness.	Writing task instructions should be more clear in future studies of expressive writing, and measures of the severity of offenses should be included. A more generalizable population should be used. Post-test measures should be given much later after the intervention than immediately.
79. 2002	Lamb	Women, Abuse, and Forgiveness: A Special Case	Before Forgiving: Cautionary Views of Forgiveness in Psychotherapy (Edited book)	Why is it not always a good idea for women to forgive?		Review		Asking women to forgive something so severe as abuse puts another burden on them to feel the pressure of needing to forgive. Framing it as an opportunity for healing themselves can be harmful and burdensome. Preserving an unhealthy relationship can put the	Forgiveness needs to be examined in terms of its negative effects, not just its benefits.

								woman in future danger, not only of further abuse, but of suppression of anger and other physical health risks. Anger should not be viewed exclusively as unhealthy, and forgiveness should also be considered in terms of its social consequences, not just its intrapersonal effects.	
80. 2002	Richards	Forgiveness as Therapy	Before Forgiving: Cautionary Views of Forgiveness Psychotherapy (Edited book)			Review		Forgiveness is not always an effective treatment because forgiveness isn't always what people need. People endure transgressions all the time, but there are other potentially helpful ways to cope than lowering resentment. Focusing on the wrong kind of healing can cause the therapist and the client to miss better opportunities for healing.	Alternatives should be explored when forgiveness interventions might seem obvious – such as other coping mechanisms that are useful when experiencing a transgression.
81. 2001	Enright	Why Forgive and the Consequences of Not Forgiving	Forgiveness is a Choice: A Step-by-Step Process for Resolving Anger and Restoring Hope (Edited Book)	Should we forgive? Why?		Review		While many techniques such as relaxation and distraction can help to lower anger, forgiveness gets to the root of the problem and contributes to lasting healthy changes.	Forgiveness interventions should be compared to anger reduction interventions in terms of physical health, mental health, and level of forgiveness.
82. 2001	Brenneis	The Relationship Between Forgiveness and Physical Health Indicators in Recovering Members of the Clergy	Journal of Ministry in Addiction and Recovery	What is the relationship between forgiveness and physical health in clergy who are recovering from substance abuse or compulsive behavior disorders?	79 male clergy members aged 32-84 years (mean age = 55.3 years) at an inpatient treatment center for clergy on the east coast. Mostly English-	Correlational; cross-sectional	*Transgression-Related Interpersonal Motivations Inventory (TRIM)	There were no significant relationships between any of the TRIM subscales and cholesterol, HDL, LDL, or blood glucose levels. The Avoidance and General Positive Statements subscales, however, were correlated with systolic and diastolic blood pressure in that higher avoidance lowered blood pressure, and higher positive statements raised blood	Forgiveness psychoeducation and Rational-Emotive therapy should be researched as an addition to forgiveness interventions.

					speaking Roman Catholic priests with graduate educations			pressure.	
83. 2001	Berry & Worthington	Forgiveness, Relationship Quality, Stress While Imagining Relationship Events, and Physical and Mental Health	Journal of Counseling Psychology	How do personality variables and relationship variables influence physical and mental health?	39 participants (20 female) from a mid-Atlantic, urban university, aged 18-42 years (mean age = 22.9 years). Mostly Caucasian.	Correlational; cross-sectional	*Trait Anger Scale (TAS) *Transgression Narrative Test of Forgiveness (TNTF) *Trait Unforgiveness-Forgiveness Scale (TUF) *Love and Liking Scales (LLS) *Dyadic Adjustment Scale (DAS) *Vividness of Visual Imagery Questionnaire (VVIQ) *Relationship Imagery Questionnaire *Salivette Sampling Kits *Short Form-36 Health Survey (SF-36)	Participants categorized as in an unhappy relationship experienced higher salivary cortisol reactivity when imagining their relationship than those who were happy with their relationship. Personality traits like high forgiveness and low anger indirectly affected cortisol reactivity via relationship variables such as happiness with relationship and liking the other party. Both personality and relationship variables were related to mental health, but only personality variables were related to physical health. This suggests that personality impacts relationship variables, which impacts mental and physical health.	Individual differences in forgiveness and anger should be considered when researching and intervening. Relationship stress should continue to be studied through the lens of forgiveness.
84. 2001	Witvliet	Forgiveness and Health: Review and Reflections on a Matter of Faith, Feelings, and Physiology	Journal of Psychology and Theology	What is the state of research on forgiveness and health, and how is it relevant to Christians?		Review		Forgiveness research has shown thus far to be a cognitive, emotional, and biological phenomenon. It is very complex, and related research is in a very youthful stage of few studies, generally descriptive and correlational in nature without a deep grasp on what forgiveness really is. Studies thus far have shown a relationship between forgiveness, unforgiveness, and hostility with mental and physical health. The study of	What are the most relevant theories and methods for continuing to study forgiveness? Future studies should not be limited to self-report data. Future research should focus on converting those who are skeptical that religious and spiritual variables can be empirically studied. In what circumstances can not forgiving be beneficial for the victim? More longitudinal studies are needed.

								forgiveness may be intimidating for forgiveness who worry about what science will say about a construct with such moral implications, but forgiveness shows promise for the “faith meets understanding” ideal.	
85. 200 1	Toussa int, Willia ms, Music k, & Everso n	Forgivenes s and Health: Age Differences in a U.S. Probability Sample	Journal of Adult Developme nt	Is age associated with the tentatively established relationships among religion, spirituality, forgiveness, and physical and mental health?	1,423 participants randomly selected from a nationally representative sample	Correlational; cross- sectional	*Survey of Consumers (a telephone survey) *Six items assessing psychological distress *One item assessing life satisfaction *One item assessing perceived health *Four items assessing religion/spirituality *2 items assessing self-forgiveness *Five items assessing forgiveness of others *Two items assessing forgiveness by God *Three items assessing proactive nature of giving and receiving forgiveness	Middle aged and old-aged adults showed higher forgiveness of others and feeling forgiven by God than young adults. Forgiveness of others was also a stronger indicator of better physical and mental health in middle and old- aged adults than in young adults. This suggests that some forgiveness levels and subsequent physical and mental health is related to age. Not all forms of forgiveness are beneficial, however, as level of proactive nature of seeking and giving forgiveness was associated with higher psychological distress.	Are religious, spiritual, and forgiveness variables stable? What does personality and variables like neuroticism contribute to the relationship between forgiveness and health? Longitudinal data is needed in this area. Social desirability measures should be included in future studies. Time and severity of the offense should be controlled for when studying forgiveness. The effects of pseudo-forgiveness should be examined as well.
86. 200 1	Stein	The Importance of Forgiveness in Marital Therapy	Dissertation Abstracts Internationa l	Do marriage therapists value forgiveness as a tool when working with couples? If so, do they use a specific method?	154 mental health and family counselors (89 female) aged 27-68 years (mean age = 43.15 years). Mostly married and Caucasian with little to no church service attendance, about half with PhDs.	Qualitative; cross- sectional	*Questionnaire on forgiveness and marital therapy	Participants were rated as having a relatively low knowledge of forgiveness literature, but had a better understanding of it as a religious concept. Forgiveness was viewed in a largely positive way by marriage therapists, though few used it in their counseling sessions, and did so in a facilitative manner.	More research is needed on specific methods of forgiveness to be used in marital therapy.
87. 200	Putna m	Revenge and	Dissertation Abstracts	What are the benefits	107 adults (78 female)	Correlational; cross-	*Wade Forgiveness Scale (WFS)	Forgiveness was not related to anxiety,	The Putnam-Enright Denial Scale should be

1		Forgiveness: Mutually Exclusive or Coexisting Constructs?	International	surrounding the coping styles of revenge, denial, and forgiveness when responding to an ex-spouse?	from Kentucky, Indiana, and Oklahoma who had been divorced for at least 6 months with a major identifiable transgression (mean age = 48.51 years). Mostly Caucasian, middle-aged, and middle class.	sectional	*Vengeance Scale *Marlowe-Crown Denial Scale *Putnam-Enright Denial Scale *Enright Forgiveness Inventory (EFI) *State-Trait Anxiety Inventory (STAI) *Beck Depression Inventory (BDI) *Rand 36-Item Short Form Health Survey (SF-36) *Spiritual Well-Being Scale (SWBS) *Marlowe-Crown Social Desirability Scale (MC-SD) – 33 Item Version	depression, or health. Revenge was associated with the lowest adjustment level, and denial was associated with the highest adjustment level. Denial therefore may be a useful coping mechanism following a transgression and subsequent divorce. Reducing anger and vengeance will likely produce benefits for the victim.	further researched to establish construct validity. More research is needed to differentiate forgiveness and revenge. A more thorough measure of spirituality besides the more vague existential well-being would be more telling in future studies. Samples should be more generalizable. More research on the harm and benefits of these coping strategies is needed. Should denial be considered a coping strategy or a defense mechanism?
88. 2000	Pargament, Koenig, & Perez,	The Many Methods of Religious Coping: Development and Initial	Journal of Clinical Psychology	Can religious coping, both good and bad, be assessed with a measure?	540 undergraduates (69% female) aged 18-38 years (mean age = 19.0 years). Mostly Caucasian, single freshmen who identified as Christian with at least some religious involvement. 551 hospital patients (48% female) aged 55-97 years (mean age = 68.4 years). Mostly Caucasian with at least a high school education	*Correlational ; cross-sectional	*3 items assessing religion *RCOPE *A measure of physical health developed by Moos, Cronkite, Billings, & Finney (1986) *General Health Questionnaire (GHQ) *2 items assessing emotional distress *Stress-Related Growth *3 items assessing religious outcome	Religious coping uniquely contributed to stress-related growth, religious outcomes, physical health, mental health, and emotional distress, even after controlling for factors such as church attendance, prayer, etc. Religious coping methods such as forgiveness and purification were related to better outcomes in these areas of adjustment. The RCOPE is useful for assessing these religious coping mechanisms.	What are the long term effects of religious coping? Longitudinal studies are needed. How does religious coping work in a variety of stressors? Interventions with religious and spiritual components should be researched.

					who viewed religion as important to them and had a severe illness				
89. 2000	Thoresen, Harris, & Luskin	Forgiveness and Health: An Unanswered Question	Forgiveness: Theory, Research, and Practice (Edited Book)	Why is forgiveness research needed? What is thought to be going on between forgiveness and physical health?		Review		The relationship between forgiveness and physical health has yet to be confirmed empirically. However, topics related to forgiveness such as anger and hostility are related to health, suggesting there is likely a relationship with forgiveness. The lowering of negative states and the increasing of positive states has been shown to be associated with health outcomes, so forgiveness should fall into this category as well. Possible mechanisms include physiological variables (particularly cardiovascular) and psychosocial variables (security, competence, social support, transcendence, etc). Forgiveness may be instrumental to health and to achieving "the good life."	What influences the benefits of forgiveness – religion? Spirituality? Social support? Personality? Are these potential mechanisms which link it to health? Diverse forms of assessments and methods should be used. Type A and narcissistic personality should be considered in forgiveness and health research as well. What is the victim focused on? How does it affect their emotions? Is the process of forgiveness similar to the process of depression, and can interventions be modeled as such? More research on self-forgiveness, the influence of others, simulated forgiveness situations, and empathy is needed. More randomized controlled trials, as well as single-case studies, structured interviews, daily monitoring, and should be used.
90. 2000	Sarino poulos	Forgiveness and Physical Health	Dissertation Abstracts International	What is the relationship between forgiveness and physical health?	101 middle-aged adults(60 female) in the Midwestern United States 91 college-aged children of the middle aged adult sample (67 female)	Correlational; cross-sectional	*Enright Forgiveness Inventory (EFI) *Forgiveness Phase *Anger Expression Scale *Cook Medley Hostility Questionnaire (Ho) *Physical Symptoms Checklist *Health Problems Scale *Two items from the Health Problems Scale	Forgiveness was related to fewer physical symptoms, particularly in the older sample, and this relationship remained even when accounting for hostility and expressed and suppressed anger. Additionally, the middle aged sample showed a relationship between forgiveness and cardiovascular symptoms. Thus, forgiveness may help	This study should be replicated. Is there a protective factor for young adults who do not forgive? Does physical health affect forgiveness? What happens to young adults who do not forgive later in life? The effect of forgiveness interventions on health outcomes should be explored in future research.

							related to cardiac health *Heart Disease-Related Symptoms	to protect health.	
91. 199 8	Denton & Martin	Defining Forgiveness: An Empirical Exploration of Process and Role	The American Journal of Family Therapy	How do clinicians view the definition, steps, and usage of forgiveness?	101 clinicians (87% female) from the North Carolina Society of Clinical Social Workers. Mostly Caucasian, Christian, and in private practice.	Correlational; cross-sectional	*18 items assessing misconceptions about forgiveness *4 items to rank order the steps of forgiveness *7 items assessing appropriate usage of forgiveness	Clinicians who were more receptive to the usage of forgiveness in therapy were more likely to define forgiveness as a process integral to therapy that involves letting go of negative feelings. Men in general were more receptive to forgiveness than women. Religion was not associated with differences in ideas about forgiveness. The steps necessary for forgiveness were agreed upon for the most part, but the order in which they should appear was not conclusive. Forgiveness was seen as appropriate for relationship problems and substance abuse, but not for intrapsychic, character, physical, or psychotic problems.	Can a standard definition of forgiveness be held across all belief structures? What are gender differences with respect to forgiveness? Future research should examine what kind of interventions are appropriate for what kind of transgressions.
92. 199 7	Coates	The Correlations of Forgiveness of Self, Forgiveness of Others, and Hostility, Depression, Anxiety, Self-Esteem, Life Adaptation, and Religiosity Among Female	Dissertation Abstracts International	What is the relationship between forgiveness of self and others and nine mental health variables in previously abused women?	107 adult women from women's centers in the San Joaquin Valley (mean age = 37.64 years old). Mostly Caucasian with at least a high school education. Mean time in abusive relationship was 10.55 years and ranged from 6	Correlational; cross-sectional	*Measurements of Forgiveness of Self and Forgiveness of Others *Multiple Affect Adjective Checklist (MAACL) *Self-Esteem Rating Scale (SERS) *Profile of Adaptation to Life-Holistic (PAL-H) *Intrinsic Religious Motivation Scale (IRM)	Hostility, depression, anxiety, self-esteem, well-being, physical symptoms, close relationships, self-activity, and social activity were all related to forgiveness of self and others. The only mental health variable not related to forgiveness was religiosity. The greatest predictor of self-forgiveness was self-esteem, and the greatest predictor of other-forgiveness was close relationships. This study suggests that forgiveness of self and others are	A better measure of religion, spirituality, and religious behaviors should be made and used in future studies. Forgiveness needs to be better defined so it can be better understood in its application. What are some other mental health indicators that might be related to forgiveness? Future studies should examine the forgiveness and mental and physical health factors of highly religious people and compare them to more secular people.

		Victims of Domestic Violence?			months to 41 years.			obviously related, yet distinct phenomena.	
93. 1994	McCullough & Worthington, Jr.	Encouraging Clients to Forgive People Who Have Hurt Them: Review, Critique, and Research Prospectus	Journal of Psychology and Theology	What is the state of forgiveness research, how do therapists view forgiveness, and what kind of research should come next?		Review		Forgiveness should be considered seriously as a therapeutic technique, even outside of the religious realm where it gets most of its attention. Forgiveness is valued among counselors and is likely associated with cognitive, emotional, and interpersonal benefits.	The link between forgiveness and health should be further explored. Forgiveness should be examined in the context of depression, anger, well-being, self-efficacy, and relationship adjustment with experimental, longitudinal, and natural correlational studies. Forgiveness interventions need to be researched, validated, and compared to other interventions. Better measures of forgiveness are also needed. Theories of forgiveness should be formulated to help conceptualize what leads to and follows forgiveness. What kind of transgressions and clients will benefit most from forgiveness interventions?
94. 1985	Brink	The Role of Religion in Later Life: A Case of Consolation and Forgiveness	The Journal of Psychology and Christianity	What is the role of religion and forgiveness in later years of life?	79 year old Caucasian woman who was recently widowed	Case Study		Religion can benefit mental health in later years of life via: spiritual fulfillment, forgiveness, moral outrage, behavioral control, acceptance of loss and deterioration of physical health, providing service, and social life.	These benefits should be further examined in correlational and longitudinal studies.
95. 1950	Bonnel	Healing for Mind and Body: Spiritual Help Comes Not From Treating Symptoms, but By Releasing Man's Deep Sense	Pastoral Psychology	What is the mind-body connection, and what does religion have to do with physical healing?		Review		The mind-body connection allows for religion to intersect with traditional medicine. In the same way that Jesus described forgiveness as healing in the Scriptures, so can forgiveness be necessary to alleviate the guilt that affects mental and physical health. The complete release of this guilt has to be spiritual to be lasting	

		of Guilt						and meaningful and is achieved through prayer.	
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Appendix B - Measures

Demographic Information

How old are you? _____ years

What is your gender? (select one): MALE FEMALE

Which best describes you?

White African-American Hispanic/Latino Asian-American Native American
Other_____

What year in school are you?

Freshman Sophomore Junior Senior
Other_____

Trait Forgivingness Scale

Directions: Indicate the degree to which you agree or disagree with each statement below by using the following scale:

1=strongly disagree

2=mildly disagree

3=agree and disagree equally

4=mildly agree

5=strongly agree

- _____ 1. People close to me probably think I hold a grudge too long.
- _____ 2. I can forgive a friend for almost anything.
- _____ 3. If someone treats me badly, I treat him or her the same.
- _____ 4. I try to forgive others even when they don't feel guilty for what they did.
- _____ 5. I can usually forgive and forget an insult.
- _____ 6. I feel bitter about many of my relationships.
- _____ 7. Even after I forgive someone, things often come back to me that I resent.
- _____ 8. There are some things for which I could never forgive even a loved one.
- _____ 9. I have always forgiven those who have hurt me.
- _____ 10. I am a forgiving person.

Values in Action Inventory of Strengths – Modesty/Humility Scale

Directions: Indicate the degree to which you agree or disagree with each statement below by using the following scale:

1=strongly disagree

2=mildly disagree

3=agree and disagree equally

4=mildly agree

5=strongly agree

1. ____ I am humble about the good things that have happened to me.
2. ____ I believe that others are drawn to me because I am humble.
3. ____ I don't act as if I'm a special person.
4. ____ I don't brag about my accomplishments.
5. ____ I am proud that I am an ordinary person.
6. ____ I don't call attention to myself.
7. ____ I would never be described as arrogant.
8. ____ I like to stand out in a crowd.
9. ____ I like to talk about myself.

The Patience Scale (PS-10)

Directions: Using the 5-point scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1 = very much unlike me

2 = unlike me

3 = neutral

4 = like me

5 = very much like me

- ____ 1. Most people would say that I am a patient person.
- ____ 2. Patience is a characteristic that I admire in others.
- ____ 3. I have to admit that patience is not one of my strengths
- ____ 4. I agree with the old saying, "patience is a virtue."
- ____ 5. In general, waiting in lines does not bother me.
- ____ 6. I believe that when it comes to getting along with others, patience is an important factor.
- ____ 7. I get very upset when stuck in a traffic jam.
- ____ 8. I agree with the adage "good things come to those who wait."
- ____ 9. My friends would say that I am calm even if there is a delay in our plans.
- ____ 10. When waiting in a checkout line, I get annoyed when cashiers chat with customers ahead of me.

The Brief Self-Control Scale

Directions: Using the 5-point scale below as a guide, write a number beside each statement to indicate how much you agree with it.

- 1 = very much unlike me
- 2 = unlike me
- 3 = neutral
- 4 = like me
- 5 = very much like me

- ____ 1. I am good at resisting temptation.
- ____ 2. I have a hard time breaking bad habits.
- ____ 3. I am lazy.
- ____ 4. I say inappropriate things.
- ____ 5. I do certain things that are bad for me, if they are fun.
- ____ 6. I refuse things that are bad for me.
- ____ 7. I wish I had more self-discipline.
- ____ 8. People would say that I have iron self-discipline.
- ____ 9. Pleasure and fun sometimes keep me from getting work done.
- ____ 10. I have trouble concentrating.
- ____ 11. I am able to work effectively toward long-term goals.
- ____ 12. Sometimes I can't stop myself from doing something, even if I know it's wrong.
- ____ 13. I often act without thinking through all the alternatives.

PANAS

This scale consists of a number of words that describe different feelings and emotions.

Read each item and then mark the appropriate answer in the space next to that word.

Indicate to what extent you **generally feel this way, that is, how you generally feel on the average.** Use the following scale to record your answers.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

<input type="checkbox"/> interested	<input type="checkbox"/> irritable
<input type="checkbox"/> distressed	<input type="checkbox"/> alert
<input type="checkbox"/> excited	<input type="checkbox"/> ashamed
<input type="checkbox"/> upset	<input type="checkbox"/> inspired
<input type="checkbox"/> strong	<input type="checkbox"/> nervous
<input type="checkbox"/> guilty	<input type="checkbox"/> determined
<input type="checkbox"/> scared	<input type="checkbox"/> attentive
<input type="checkbox"/> hostile	<input type="checkbox"/> jittery
<input type="checkbox"/> enthusiastic	<input type="checkbox"/> active
<input type="checkbox"/> proud	<input type="checkbox"/> afraid

Vita

Caroline Rose Lavelock was born on October 18, 1988, in Kansas City, Missouri. Caroline is currently a second year doctoral student in the Counseling Psychology program at Virginia Commonwealth University. She received her Bachelor of Arts in Psychology with minors in Religious Studies and Italian from the University of Missouri in Columbia, Missouri in 2010. Caroline looks forward to her summer wedding and to residing with her husband in Richmond, Virginia.